

CONSTRUCTION SEQUENCE PROVISIONS

- FACILITIES AND INFRASTRUCTURE IMPROVEMENTS IN WORK AREAS #1, #2 AND #3 MAY BE CONDUCTED SEQUENTIALLY IN ORDER, BUT COULD ALSO BE COMPLETED SIMULTANEOUSLY AS DIRECTED BY AMTRAK IF APPROPRIATE.
- EXCAVATED MATERIALS FROM WORK AREAS #1, #2 AND #3 NEED TO BE PLACED IN THE APPROPRIATE SOIL PILE IN THE DEDICATED AREA SHOWN (WORK AREA #4) ON THE EROSION AND SEDIMENTATION (E&S) CONTROL PLANS. SOILS WILL BE SEGREGATED BY CONSTITUENT CONCENTRATION LEVELS FROM PREDETERMINED SAMPLING RESULTS. AFTER LABORATORY RESULTS ARE RECEIVED AND EVALUATED BY STANTEC, THE EXCAVATED MATERIALS CAN THEN BE HAULED AWAY TO THE PROPER DESIGNATED DISPOSAL FACILITY.

NOTIFICATIONS PRIOR TO CONSTRUCTION

- NOTIFY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL'S (DNREC) SEDIMENT AND STORMWATER PROGRAM AT LEAST 5 DAYS PRIOR TO THE START OF ANY LAND DISTURBANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING AT (302) 739-9921.
- PAUL MILLER OR STEVE BAGGETT OF STANTEC SHOULD BE CONTACTED AT (610) 840-2500 PRIOR TO BEGINNING CONSTRUCTION.

GENERAL NOTES

1. THE EARTH MOVING CONTRACTOR OR AMTRAK EXCAVATOR MUST CONTACT MISS UTILITY OF DELMARVA AT 800-282-8555 AND REQUEST THAT ALL UTILITY LINES BE MARKED IN THE FIELD ON THE PROJECT SITE "NOT LESS THAN 3 WORKING DAYS, BUT NO MORE THAN 10 WORKING DAYS, PRIOR TO THE EXCAVATION OR DEMOLITION ACTIVITIES".
2. AMTRAK IS THE RESPONSIBLE PARTY OF THIS PROJECT.
3. DURING EXCAVATION, ALL SOILS WILL BE DEWATERED BY PUMPING ENCOUNTERED WATER INTO FRAC TANKS WITH OIL/WATER SEPARATORS, WHICH THEN WILL BE FILTERED THROUGH CARBON AND DISCHARGED TO THE EXISTING NPDES-PERMITTED STORMWATER CONVEYANCE SYSTEM.
4. PLAN REVISIONS OR DEVIATION FROM PROPOSED CONSTRUCTION WORK ON THE PLANS MUST BE APPROVED BY STANTEC PRIOR TO THOSE CHANGES BECOMING PERMANENT.
5. A COPY OF THE APPROVED CONSTRUCTION PLANS AND EROSION AND SEDIMENTATION CONTROL PLANS MUST BE ON SITE DURING CONSTRUCTION.
6. ALL EXCESS SOIL MATERIALS THAT MUST BE DISPOSED OFF-SITE AT A LICENSED DISPOSAL FACILITY SHOULD NOT BE LOCATED IN ANY WETLANDS, STREAM CHANNEL, FLOODWAY OR FLOODPLAIN.
7. ALL EXCAVATED SOILS AND CONCRETE RUBBLE MUST BE TRANSPORTED TO WORK AREA #4 IN THE PROPER SEGREGATED PILES WHERE A 10 MIL LINER WILL SEPARATE SOIL PILE MATERIAL FROM THE EXISTING GROUND AND WILL ALSO BE COVERED WITH A LINER TARP OF THE SAME THICKNESS. ONCE EXCAVATED MATERIALS ARE SAMPLED FOR CONSTITUENTS OF CONCERN, THE SOILS WILL THEN BE HAULED OFFSITE TO THE PROPER DISPOSAL FACILITY. NO LINER IS TO BE PLACED OVER THE CONCRETE RUBBLE PILE.

NATURAL RESOURCES NOTES

1. NO STATE OR FEDERAL WETLANDS ARE LOCATED WITHIN OR NEAR THE PROJECT'S WORK AREAS DUE TO THE EXISTING INDUSTRIALIZED NATURE OF THE FACILITY.
2. THE PORTION OF THE WILMINGTON MAINTENANCE FACILITY PROPERTY THAT IS SHOWN ON PROJECT PLANS IS ENTIRELY LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS MAPPED BY FEMA.

OWNER'S CERTIFICATION:

I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

OWNER REPRESENTATIVE _____ DATE _____

GEORGE DUTTON
AMTRAK
4001 VANDEVER AVE.
WILMINGTON, DE 19802
PHONE: 302-429-6245

SITE DESIGNER CERTIFICATION:

I, HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES:

SITE DESIGNER _____ DATE _____

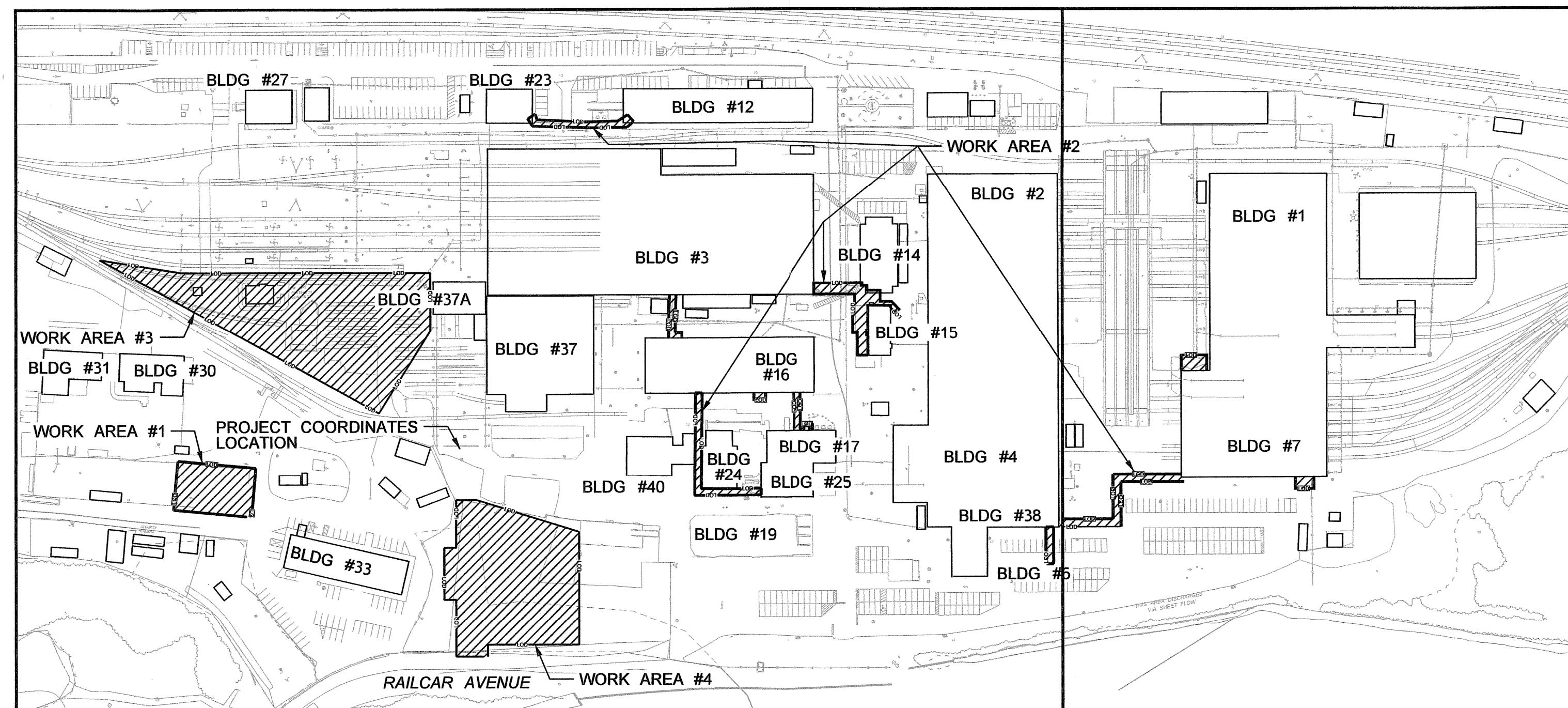
ALEXANDER J. DENADAI, P.E., #20160
STANTEC CONSULTING SERVICES, INC.
1060 ANDREW DRIVE, SUITE 140
WEST CHESTER, PA 19380
PHONE: 610-840-2550



WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS SEDIMENT AND STORMWATER MANAGEMENT PLANS BRANDYWINE HUNDRED BRANDYWINE-CHRISTINA WATERSHED TAX PARCELS 2603700013 AND 2603000064 CITY OF WILMINGTON NEW CASTLE COUNTY, DELAWARE



INDEX SHEET



SHEET KEY MAP
SCALE: 1" = 150'

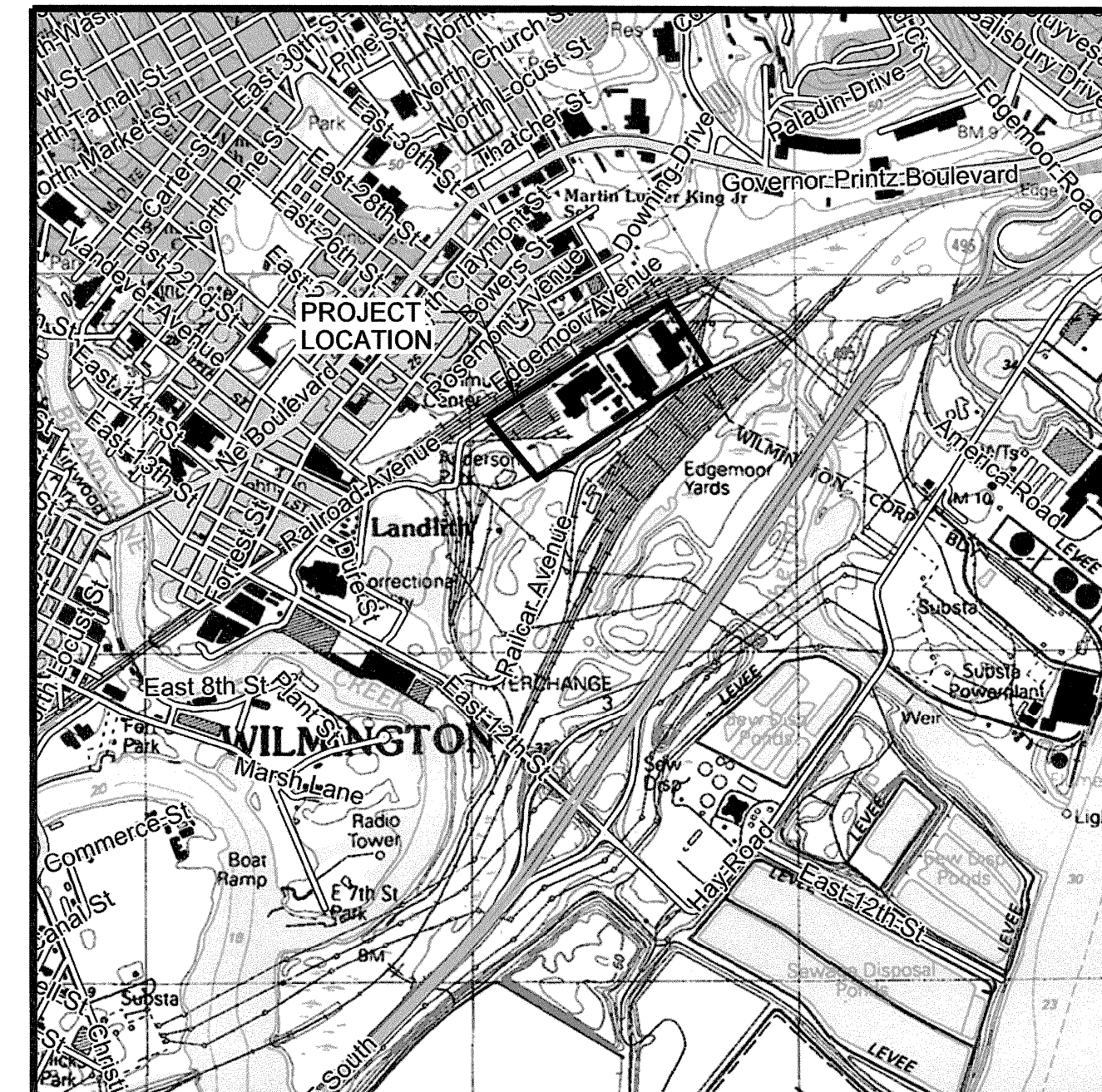
PROJECT NOTES

1. TAX MAP ID: GRID #11403561.
2. DNREC SEDIMENT AND STORMWATER PROGRAM #2015-061.
3. SITE ADDRESS: 4001 VANDEVER AVE WILMINGTON, DE 19802.
4. WORK AREA COORDINATES (SHED BETWEEN WORK AREAS #3 AND #4): 39.745769 LATITUDE, -75.521419 LONGITUDE.
5. EXISTING SITE AREA - PARCEL = 36.28 ACRES, ENTIRE FACILITY=104.44 ACRES.
6. PROPOSED PROJECT AREA DISTURBANCE: 2.7 ACRES TOTAL LOD.
7. WETLANDS: NO JURISDICTIONAL WETLANDS ON PARCEL OR WITHIN/NEAR LOD.
8. PROPOSED DISCHARGE LOCATIONS: NO STORMWATER DISCHARGE POINTS VIA NEW OUTFALLS. WORK AREAS TO BE DEWATERED AND TREATED VIA PROCESS SHOWN ON SHEETS 12 AND 13.

INFRASTRUCTURE WORK AREAS

- AREA #1 - CAR SHOP 1 BUILDING RELOCATION
- AREA #2 - STEAM AND COMPRESSED AIR OPTIMIZATION IMPROVEMENT AREA
- AREA #3 - ACS-64 LOCOMOTIVE TEST AND DIAGNOSTIC CENTER
- AREA #4 - SOIL AND RUBBLE HANDLING AREA

No.: 2015-061
By: *Randall V. Green*
Title: *E.S.*
Approval Date: *12/22/15*
Expiration Date: *12/22/16*



USGS WILMINGTON
SOUTH DELAWARE
QUADRANGLE
7.5 MINUTE SERIES
SCALE
0 1/4 1/2 MILE

LIST OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2 - 3	EXISTING CONDITIONS PLAN
4	PROPOSED WORK AREA #1
5	PROPOSED WORK AREA #2
6	PROPOSED WORK AREA #3
7 - 8	SCHEMATIC CONSTRUCTION SITE STORMWATER MANAGEMENT PLANS (WORK AREAS #1, #2 AND #3)
9 - 13	E&S CONTROL NOTES & DETAILS

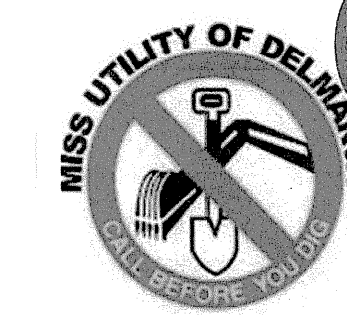
MISS UTILITY OF DELMARVA

AS PRESCRIBED BY DELAWARE TITLE 26, CHAPTER 8, STANTEC HAS CONTACTED THE UTILITIES SERVICE PROTECTION CENTER OF DELMARVA, INC. (USPCD), KNOWN AS "MISS UTILITY OF DELMARVA" ON JUNE 16, 2015 AND OBTAINED "NOTICE OF INTENT TO EXCAVATE" DESIGNER TICKETS FOR THE FUTURE EXCAVATION ACTIVITIES RELATED TO THE PROPOSED CONSTRUCTION WORK SHOWN ON THESE PLANS. STANTEC DESIGNER TICKET NUMBERS INCLUDE THE FOLLOWING:

TICKET NO: 151670030

IT IS THE DUTY OF THE EXCAVATOR COMPLETING THE EXCAVATION WORK SHOWN ON THESE PLANS TO "NOTIFY THE APPROVED NOTIFICATION CENTER NOT LESS THAN 3 WORKING DAYS, BUT NO MORE THAN 10 WORKING DAYS, PRIOR TO THE EXCAVATION OR DEMOLITION ACTIVITIES." THIS NOTIFICATION SHOULD BE COMPLETED BY THE EXCAVATOR CALLING "MISS UTILITY OF DELMARVA" AT 800-282-8555 AND REQUESTING THAT ALL UTILITY LINES BE MARKED IN THE FIELD ON THE PROJECT SITE AND THAT MAPPING BE PROVIDED PRIOR TO ALL EXCAVATION WORK.

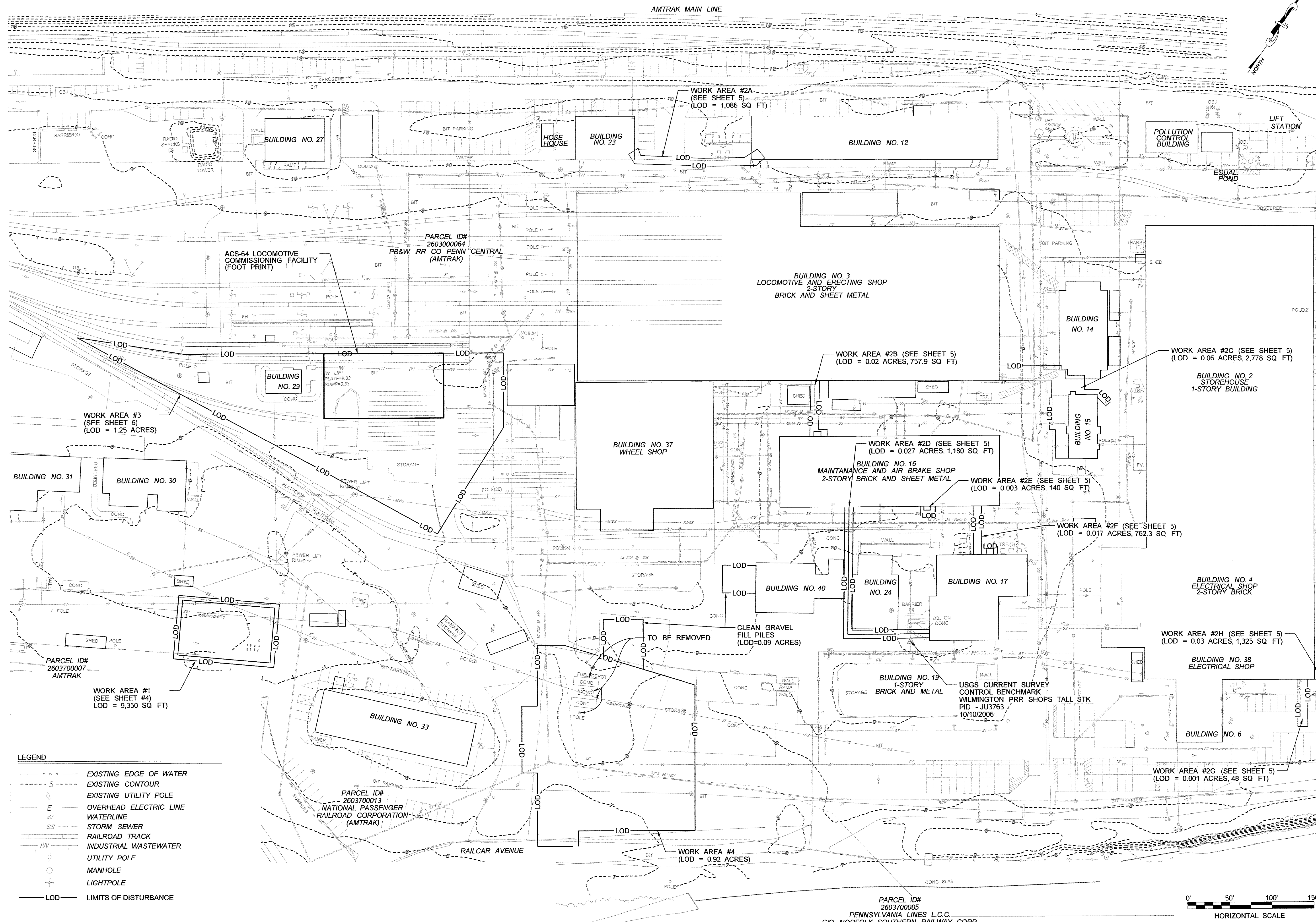
STANTEC DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO THE SAID NOTICE OF INTENT TO EXCAVATE REQUEST OR WHAT IS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT STANTEC IS REFLECTING THAT THE NOTICE OF INTENT TO EXCAVATE ON A DESIGN LEVEL HAS BEEN REPORTED. LISTS OF UTILITY COMPANY MEMBERS THAT HAVE BEEN NOTIFIED ARE AVAILABLE THROUGH REFERENCING THE TICKET NUMBERS LISTED ABOVE.



CCR COPY
Call 811 or Delaware: 800-282-8555

RECEIVED
NOV 23 2015

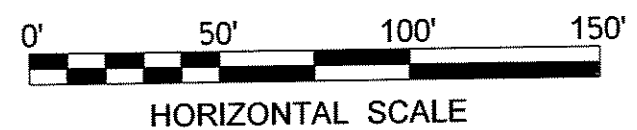
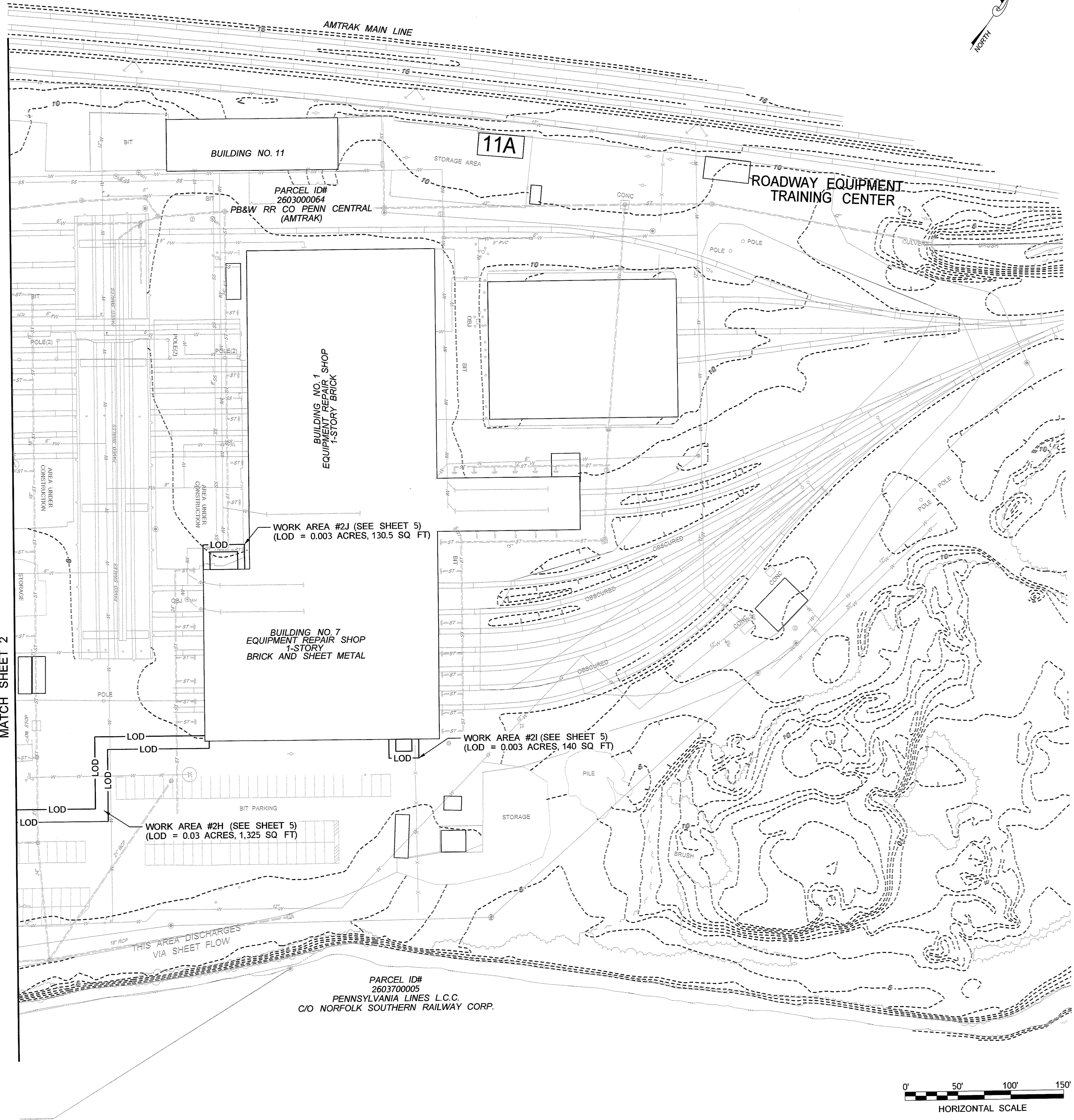
1	04/25/14	VEHICLE CLEANING PADS	1	REV.	DATE	DESCRIPTION
2	07/23/15	REVISIONS AS PER 07/23/15 DNREC MEETING	2			
3	09/07/15	SUBMISSION TO DNREC	3			
4	10/27/15	REVISIONS AS PER 10/27/15 DNREC MEETING	4			
OWNER: AMTRAK 4001 Van Dever Avenue Wilmington, DE 19802 Phone: (302) 429-6245						
THIS DOCUMENT WAS PREPARED BY: STANTEC FOR: AMTRAK						
COVER SHEET FOR WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS CITY OF WILMINGTON NEW CASTLE COUNTY, DE						
DATE: 09/01/2015						
SCALE: AS SHOWN						
DESIGNED BY: RJH						
FILE NO: 213402048						
SHEET 1 OF 13						
REV:						



1	04/25/14	VEHICLE CLEANING PADS
2	07/23/15	REVISIONS AS PER 07/02/15 DNREC MEETING
3	09/01/15	SUBMISSION TO DNREC
4	10/12/15	REVISIONS AS PER 10/02/15 DNREC MEETING
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LEGEND	
	EXISTING EDGE OF WATER
	EXISTING CONTOUR
	EXISTING UTILITY POLE
	OVERHEAD ELECTRIC LINE
	WATERLINE
	STORM SEWER
	RAILROAD TRACK
	INDUSTRIAL WASTEWATER
	UTILITY POLE
	MANHOLE
	LIGHTPOLE
	LIMITS OF DISTURBANCE

MATCH SHEET 2



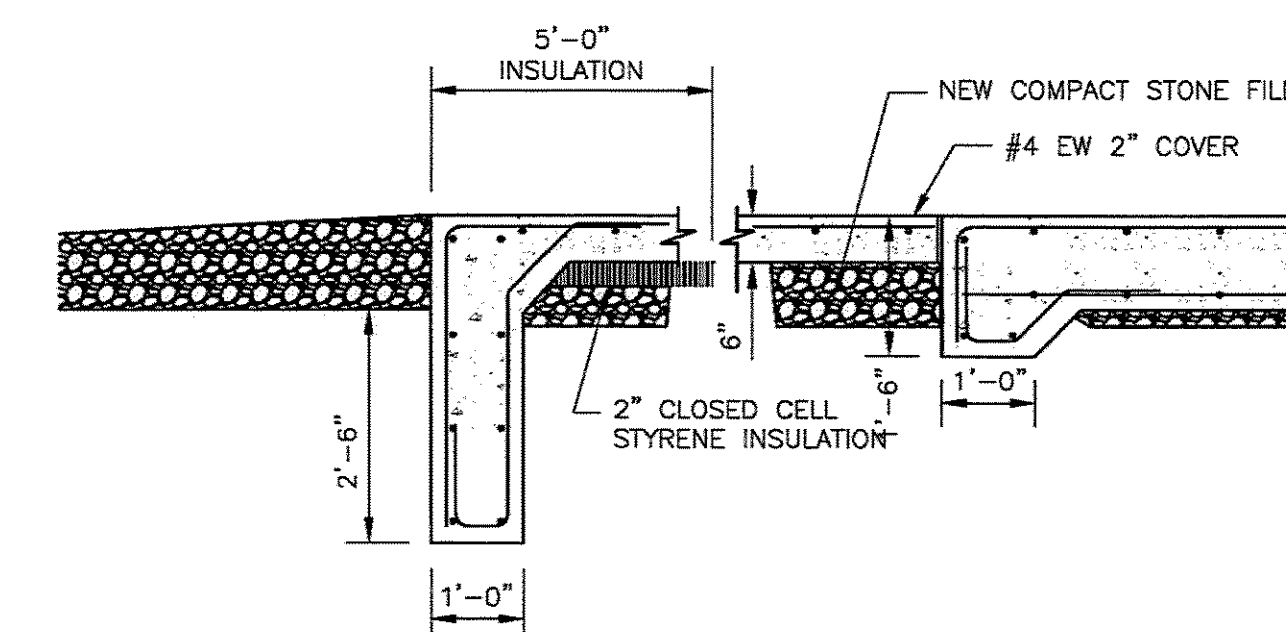
EXISTING CONDITIONS PLAN
FOR
WILMINGTON MAINTENANCE FACILITY
FACILITIES AND INFRASTRUCTURE
IMPROVEMENT PROJECTS
NEW CASTLE COUNTY, DE
CITY OF WILMINGTON

THIS DOCUMENT WAS
PREPARED BY:
STANTEC
FOR:
AMTRAK

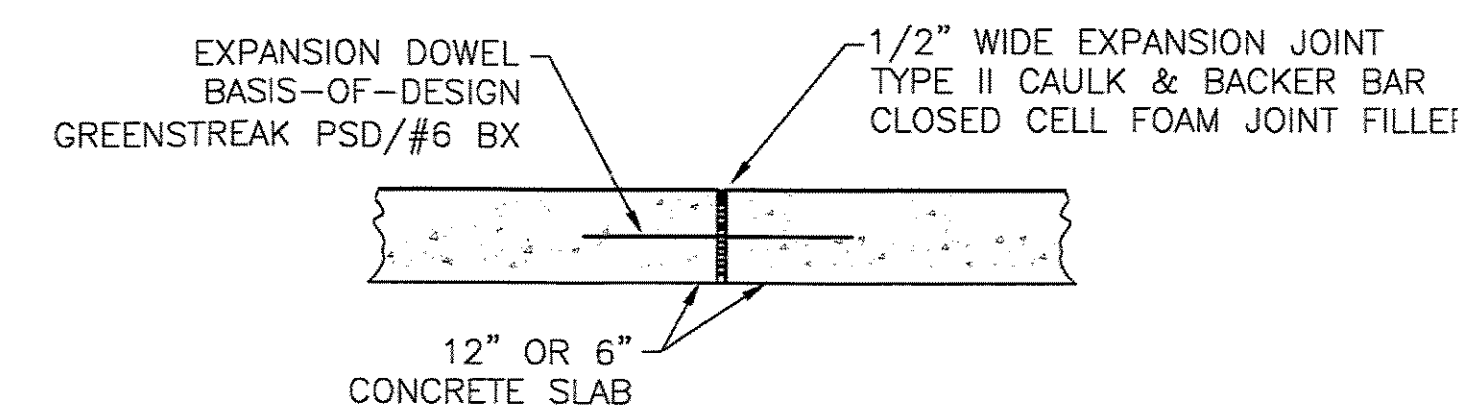
OWNER:
AMTRAK
4401 Vandewater Avenue
Wilmington, DE 19806
Phone: (302) 429-6458

Stantec
1000 River Road, Suite 102
Wilmington, DE 19806
Phone: (317) 516-3302

VEHICLE CLEANING PADS	
1	04/25/14
2	07/23/15
3	09/01/15
4	10/12/15
REV.	DATE
DESCRIPTION	BY



SECTION B-B
SCALE: $\frac{1}{2}" = 1'-0"$



EXPANSION JOINT (EJ) DETAIL
SCALE: 1"=1'-0"


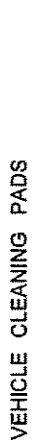
DETAILS PREPARED BY:
ON-BOARD ENGINEERING CORPORATION
DRAWING S101 DATED 10/17/14

LEGEND:

SS = SANITARY SEWER
W = POTABLE WATER SUPPLY
OHW = OVERHEAD WIRE
GR = GUARD RAIL
X-X = CHAINLINK FENCE
FH = FIRE HYDRANT
UGT = UNDERGROUND
TELEPHONE
LOD = LIMIT OF DISTURBANCE

- WORK AREA #1
PROPOSED NEW CAR SHOP 1 BUILDING
LOCATION: 110 FT X 65 FT
POLE BARN ON CONCRETE SLAB

PLAN PREPARED BY:
ON-BOARD ENGINEERING CORPORATION
DRAWING C100 DATED 9/25/14

PROPOSED WORK AREA #1 CAR SHOP 1 BUILDING RELOCATION WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS CITY OF WILMINGTON NEW CASTLE COUNTY DE		THIS DOCUMENT WAS PREPARED BY: STANTEC FOR: AMTRAK		OWNER:  4001 Vandalier Avenue Wilmington, DE 19802 Phone: (302) 426-4488		 Stantec 5509 Blue Road, Suite 100 Mechanicsburg PA 17055 Phone: (717) 516-3502		VEHICLE CLEANING TAGS 1 04/25/14 2 07/23/15 REVISIONS AS PER 07/02/15 DNREC MEETING 3 09/01/15 SUBMISSION TO DNREC 4 10/12/15 REVISIONS AS PER 10/02/15 DNREC MEMO		DATE: 09/01/2015 SCALE: AS SHOWN DESIGNED BY: RJH FILE NO.: 2134020248 SHEET 4 OF 13 REV:
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Energy Legacy
TBL
ENERGY_ARCH.DWG
P.11

EXISTING FEATURES LEGEND

- BUILDING
- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- SIDEWALK
- PAVEMENT
- RETAINING WALL
- CURB
- FENCE
- GUARD/GUIDE RAIL
- PLATFORM
- SLAB/PAD
- RAILROAD
- STREAM/WATERWAY
- BRUSH/TREE LINE
- STONE/GRAVEL
- BOLLARD
- EXTERIOR STEPS
- DECIDUOUS TREE
- OVERHEAD DOOR
- DOOR

EXISTING UTILITIES LEGEND

- ST U.G. STORM
- SAN U.G. SANITARY
- W U.G. WATER (POTABLE)
- GAS U.G. GAS
- E U.G. ELECTRIC
- T U.G. TELECOM
- OHE OVERHEAD WIRE
- FM FORCEMAIN
- U.G. UNKNOWN
- MANHOLE
- INLET
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE

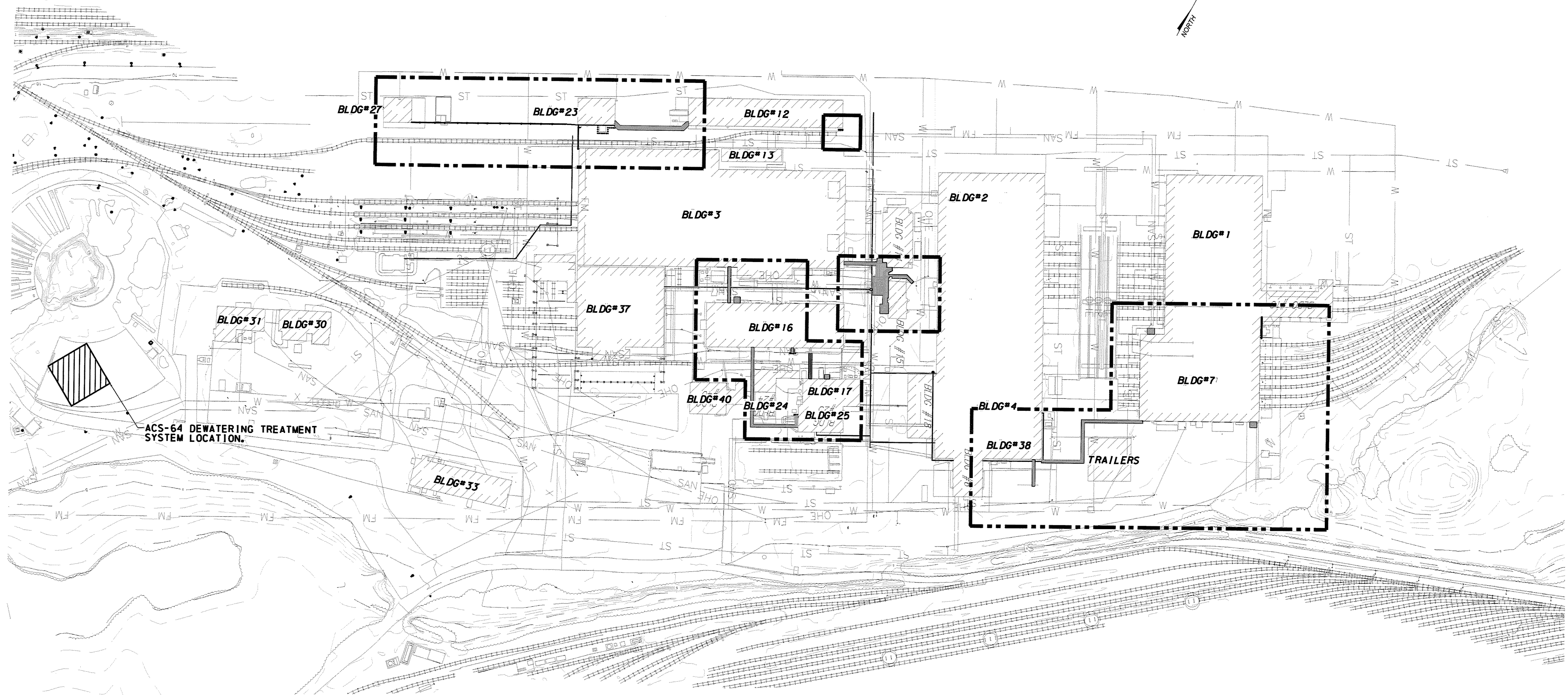
NEW WORK LEGEND

- PAVEMENT
- SLAB
- GRAVEL
- GAS
- U.G. WATER
- U.G. SANITARY
- BEAM
- POST
- RAIL POST
- BOLLARD
- GENERAL SERVICE AREA

A
C3.00

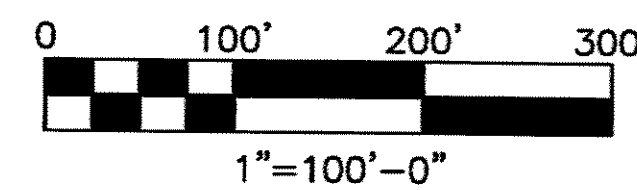
CIVIL NEW WORK PLAN
OVERALL

SCALE: 1" = 100' - 0"



ACS-64 DEWATERING TREATMENT
SYSTEM LOCATION.

WORK AREA #2
IMPROVEMENT AREA EXCAVATIONS,
INFRASTRUCTURE INSTALLATIONS
AND TRENCH/ SURFACE RESTORATIONS



PREPARED BY:
INTEGRATED PROJECT SERVICES
AND MAINSTAY ENGINEERING GROUP
DRAWING C3.00
DATED 05/06/14

10/12/2015
WORKSPACE: (SURVEY FEET)
UNITS: 1340204813.0 CADD: 13.1 Highway - 2'x10'ES 2018enp004.dgn

REV.	DATE	DESCRIPTION
1	04/25/14	VEHICLE CLEANING PADS
2	07/23/15	REVISIONS AS PER 07/23/15 DIRECT MEETING
3	09/01/15	SUBMISSION TO DIRECT
4	10/12/15	REVISIONS AS PER 10/02/15 DIRECT MEETING

stantec
5000 Ritter Road, Suite 102
Mechanicsburg, PA 17055
Phone: (717) 316-5502

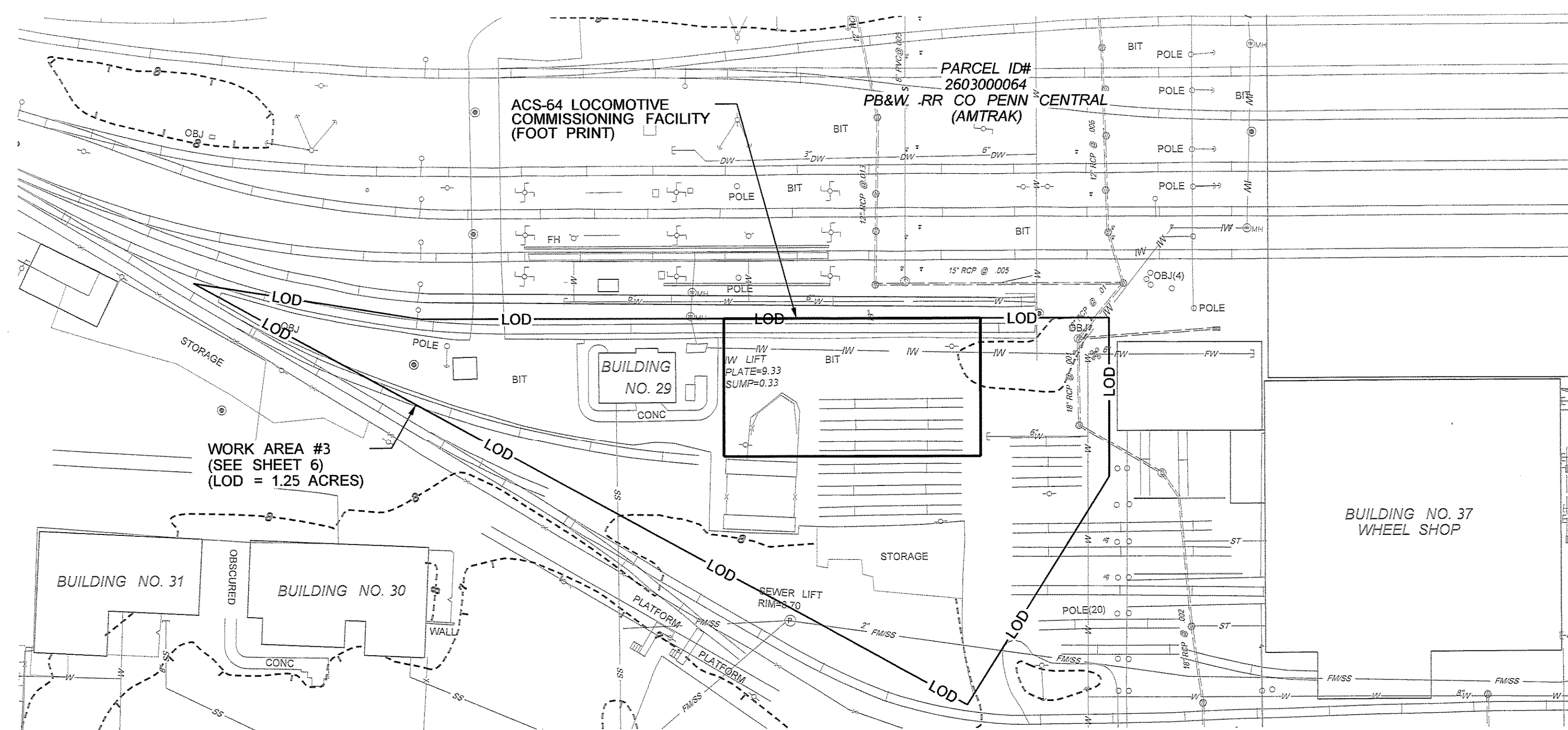
OWNER:
AMTRAK
4001 Vandewater Avenue
Mechanicsburg, PA 17055
Phone: (717) 424-8456

THIS DOCUMENT WAS
PREPARED BY:
STANTEC
FOR:
AMTRAK

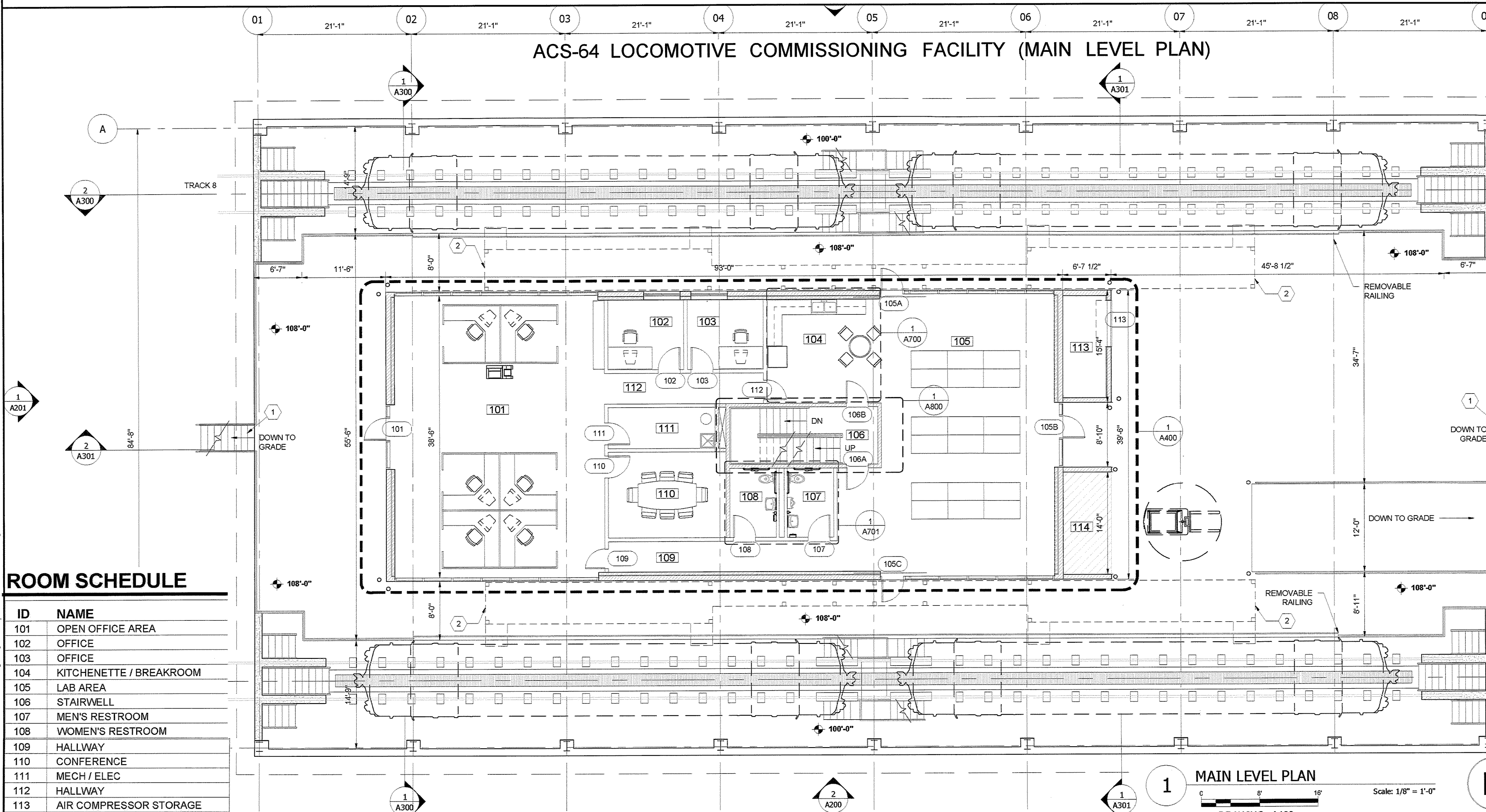
PROPOSED WORK AREA #2
STEAM & COMPRESSED AIR OPTIMIZATION AND IMPROVEMENT AREAS
WILMINGTON MAINTENANCE FACILITY
FACILITIES AND INFRASTRUCTURE
IMPROVEMENT PROJECTS
CITY OF WILMINGTON
NEW CASTLE COUNTY, DE

DATE: 09/01/2015
SCALE: AS SHOWN
DESIGNED BY: RJH
FILE NO.: 213402048
SHEET 5 OF 13
REV:

WORK AREA #3



ACS-64 LOCOMOTIVE COMMISSIONING FACILITY (MAIN LEVEL PLAN)



ROOM SCHEDULE

ID	NAME
101	OPEN OFFICE AREA
102	OFFICE
103	OFFICE
104	KITCHENETTE / BREAKROOM
105	LAB AREA
106	STAIRWELL
107	MEN'S RESTROOM
108	WOMEN'S RESTROOM
109	HALLWAY
110	CONFERENCE
111	MECH / ELEC
112	HALLWAY
113	AIR COMPRESSOR STORAGE
114	COVERED STAGING AREA

KEYNOTES

1. PRE-FORMED METAL STAIRS. REFER TO SHEET X802 FOR DETAILS AND STAIR SECTIONS.

NOTES

1. DRAWINGS ARE DIAGRAMMATIC IN NATURE, FIELD VERIFY EXISTING CONDITIONS AND CONNECTION POINTS PRIOR TO STARTING WORK. FULLY COORDINATE WORK WITH OTHER TRADES.
2. THIS DRAWINGS IS FOR GENERAL INFORMATION ONLY, AND DOES NOT INDICATE ALL REQUIREMENTS. REFER TO THE RELEVANT DRAWINGS, SPECIFICATIONS AND ACTUAL FIELD CONDITIONS TO DETERMINE THE FULL SCOPE OF ANY DEMOLITION ACTIVITIES.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND BE FAMILIAR WITH THE RULES AND REGULATIONS OF THE FEDERAL, STATE, COUNTY AND CITY. REPORT ALL DISCREPANCIES TO THE OWNER.
4. TEMPORARY SHUTDOWNS OF BUILDING SYSTEMS MUST BE COORDINATED AND APPROVED BY OWNER.
5. PROTECT ALL WORK WHICH IS TO REMAIN, INCLUDING ANY ELECTRICAL, STRUCTURAL OR MECHANICAL FIXTURES, DISCONNECTS, LIGHTS, CONVENIENCE OUTLETS, COLUMNS, PIPING, ETC.

LEGEND

GRAPHIC	DESCRIPTION
	8" ROUGH FACED C.M.U. EXTERIOR W/ 3 1/2" METAL STUDS W/ 5/8" GYP. BD. AT INTERIOR SIDE ONLY
	8" C.M.U.
	3 1/2" METAL STUDS W/ 5/8" GYP BOARD EACH SIDE
	WINDOW WALL

MAIN LEVEL PLAN



Scale: 1/8" = 1'-0"

PREPARED BY:
TKDA
DRAWING A100 DATED 02/14/14 AND
DRAWING A102 DATED 02/14/14

VEHICLE CLEANING PADS	
1	04/25/14
2	07/23/15
3	09/01/15
4	10/12/15
REV.	DATE
DESCRIPTION	
BY	

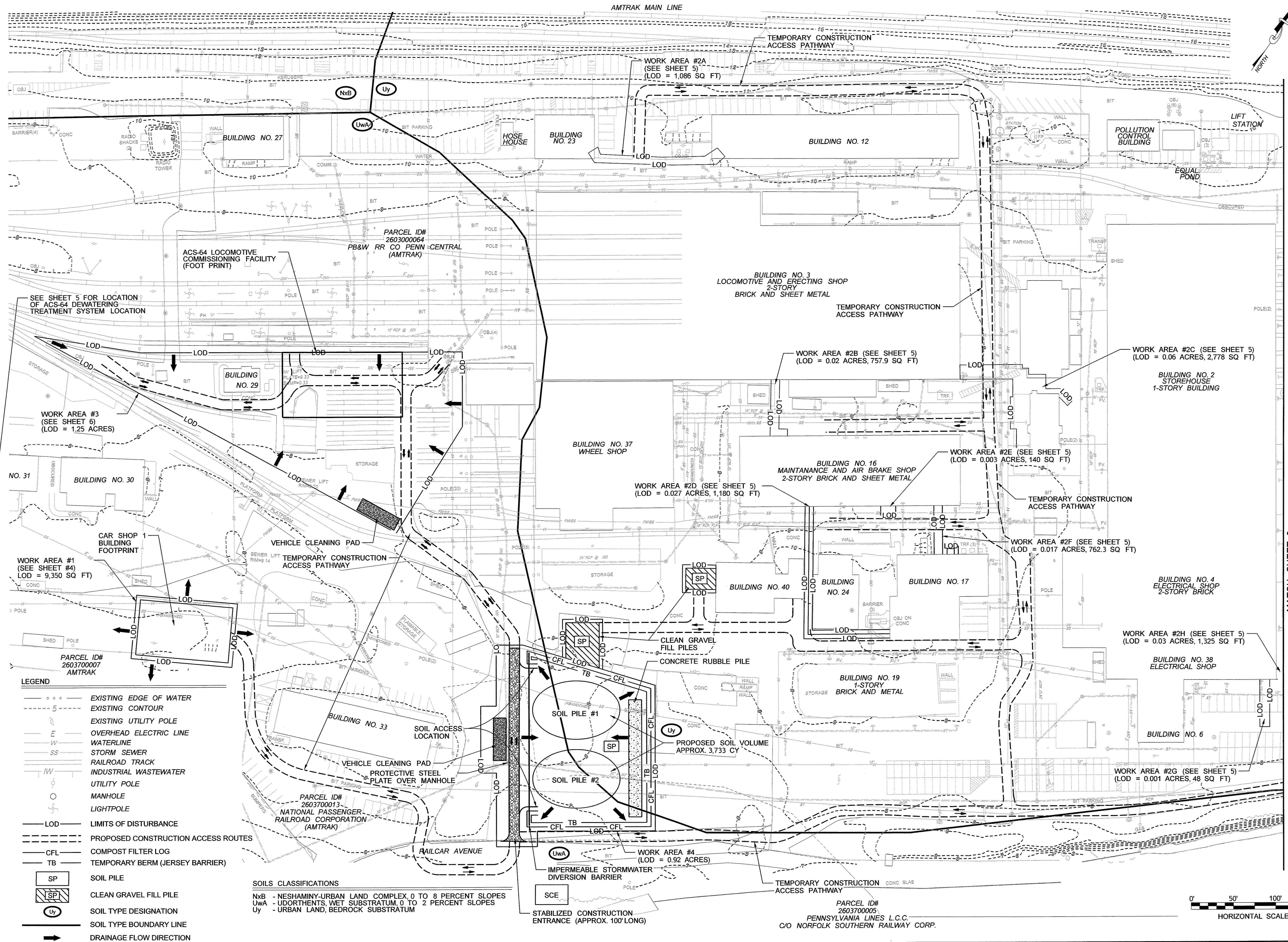
500 River Road, Suite 102
Mechanicville, NY 12053
Phone: (518) 516-3502

OWNER:
AMTRAK

THIS DOCUMENT WAS
PREPARED BY:
STANTEC
FOR:
AMTRAK

PROPOSED WORK AREA #3
ACS-64 LOCOMOTIVE TEST AND DIAGNOSTIC CENTER
WILMINGTON MAINTENANCE FACILITY
FACILITIES AND INFRASTRUCTURE
IMPROVEMENT PROJECTS
CITY OF WILMINGTON NEW CASTLE COUNTY, DE

DATE: 09/01/2015
SCALE: AS SHOWN
DESIGNED BY: RJH
FILE NO.: 213402048
SHEET 6 OF 13
REV:



10/12/2015
WORKSHEET (SURVEY FEET)
UN 21340204813, C CADD\13, 1 Highway - 2\pRES\2048eep501.dgn

Energy Legacy
Color, D, Block, TBL
ENERGY_ARCH D, PDF, P11

REV.	DATE	DESCRIPTION
1	04/25/14	VEHICLE CLEANING PADS
2	07/23/15	REVISIONS AS PER 07/02/15 DNRCC MEETING
3	09/01/15	SUBMISSION TO DNRCC
4	10/12/15	REVISIONS AS PER 10/02/15 DNRCC MEMO

OWNER:
AMTRAK

4201 Vandalia Avenue
Wilmington, DE 19802
Phone: (302) 425-6459

THIS DOCUMENT WAS
PREPARED BY:
STANTEC
FOR
AMTRAK

SCHEMATIC CONSTRUCTION SITE
STORMWATER MANAGEMENT PLANS FOR
WILMINGTON MAINTENANCE FACILITY
FACILITIES AND INFRASTRUCTURE
IMPROVEMENT PROJECTS
CITY OF WILMINGTON

DATE: 09/01/2015

SCALE: AS SHOWN

DESIGNED BY: RJH

FILE NO.: 213402048

SHEET 7 OF 13

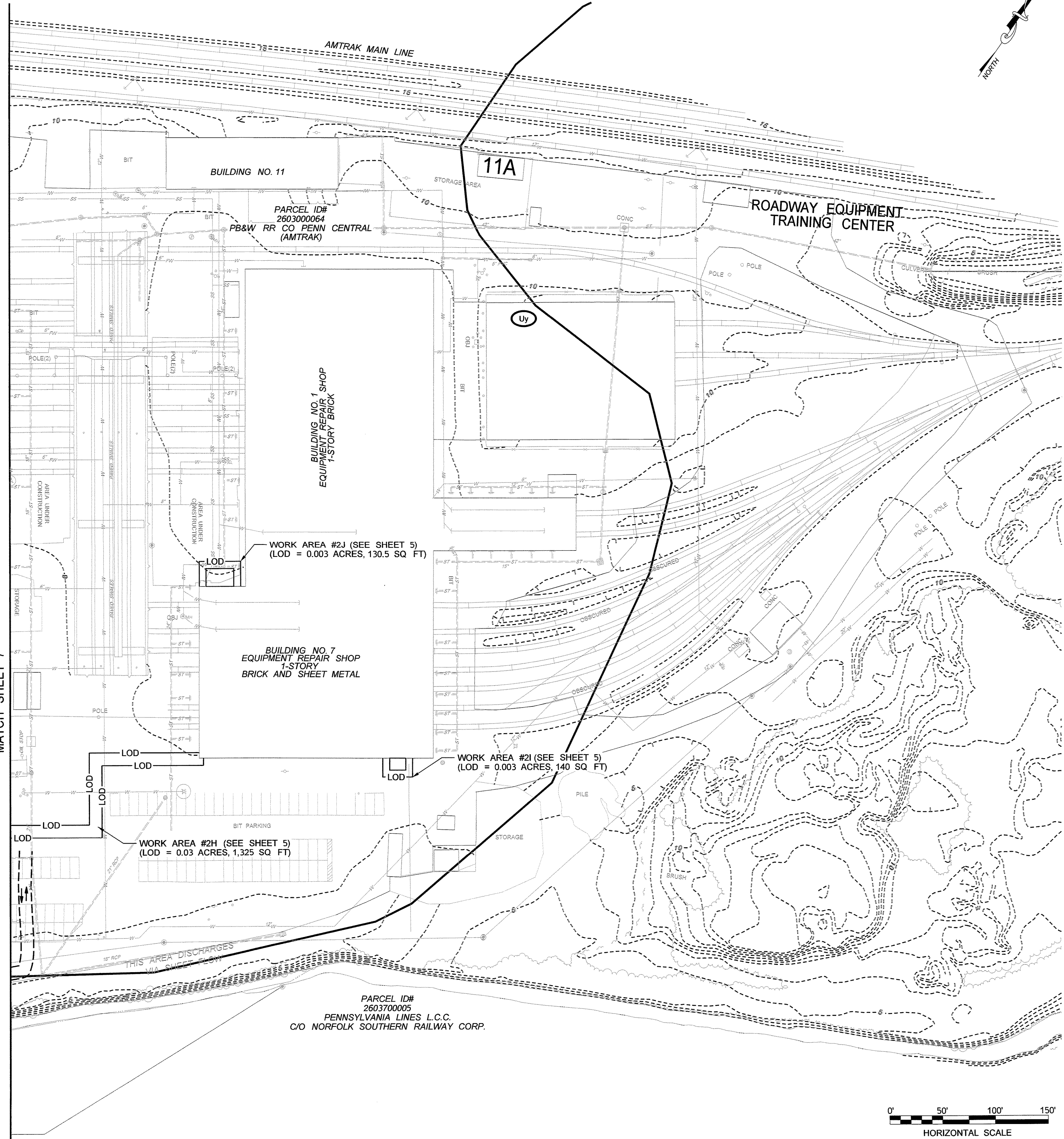
REV:

Stantec

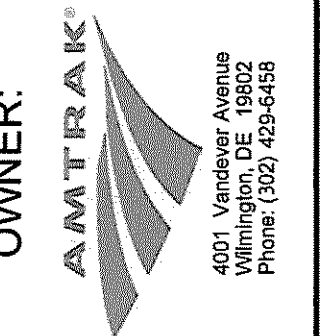
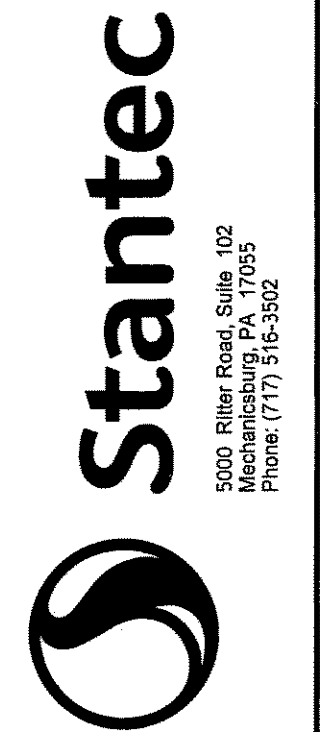
5500 Pine Rock, Suite 100
Mechanicsburg, PA 17055
Phone: (717) 516-3502

LEGEND	
	EXISTING EDGE OF WATER
	EXISTING CONTOUR
	EXISTING UTILITY POLE
	OVERHEAD ELECTRIC LINE
	WATERLINE
	STORM SEWER
	RAILROAD TRACK
	INDUSTRIAL WASTEWATER
	UTILITY POLE
	MANHOLE
	LIGHTPOLE
	LIMITS OF DISTURBANCE
	PROPOSED CONSTRUCTION ACCESS ROUTES
	COMPOST FILTER SOCK
	TEMPORARY BERM (JERSEY BARRIER)
	SOIL PILE
	SOIL TYPE DESIGNATION
	SOIL TYPE BOUNDARY LINE

MATCH SHEET 7



SCHEMATIC CONSTRUCTION SITE STORMWATER MANAGEMENT PLANS FOR WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS CITY OF WILMINGTON NEW CASTLE COUNTY, DE	
OWNER: AMTRAK 401 Market Avenue Wilmington, DE 19802 Phone: (302) 425-4458	
THIS DOCUMENT WAS PREPARED BY: STANTEC FOR: AMTRAK	
DATE: 09/01/2015	
SCALE: AS SHOWN	
DESIGNED BY: RJH	
FILE NO.: 213402048	
SHEET 8 OF 13	
REV:	
1 04/21/14 VEHICLE CLEANING PADS	
2 07/23/15 REVISIONS AS PER 07/02/15 DNREC MEETING	
3 09/01/15 SUBMISSION TO DNREC	
4 10/12/15 REVISIONS AS PER 10/02/15 DNREC MEMO	
REV.	DATE
DESCRIPTION	
BY	



EROSION & SEDIMENTATION CONTROL NOTES

7. CONSTRUCTION ACCESS INTO UNPAVED AREAS FROM PAVED / SHALL BE VIA THE STABILIZED CONSTRUCTION ENTRANCE AND

7. CONSTRUCTION ACCESS INTO UNPAVED AREAS FROM PAVED AREAS SHALL BE VIA THE STABILIZED CONSTRUCTION ENTRANCE AND THE EXISTING STABILIZED CONSTRUCTION ACCESS ROUTES.
8. SEDIMENT SPILLED, DROPPED OR TRACKED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY.
- C. MAINTENANCE OF SEDIMENT AND EROSION CONTROL FACILITIES
 1. ALL SEDIMENT AND EROSION CONTROL FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR IN OPERATING CONDITION UNTIL REPLACEMENT AREA IS STABILIZED WITH FINAL GROUND COVER (COMPACTED GRAVEL OR CONCRETE COVER).
 2. IT SHALL BE THE RESPONSIBILITY OF AMTRAK AND THE GENERAL CONTRACTOR TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING ANY UTILITY INSTALLATION.
 3. DURING ALL PLAN REVIEW AND APPROVAL PROCESSES IT SHALL BE THE RESPONSIBILITY OF AMTRAK AND ITS GENERAL CONTRACTOR TO MAINTAIN FACILITIES AND PRACTICES TO CONTROL EROSION AND SEDIMENTATION ON THE SITE.

CONSTRUCTION SEQUENCE CONTINUED

- ## CONSTRUCTION SITE WASTE MANAGEMENT AND SPILL CONTROL

POLLUTION PREVENTION - SPILL PREVENTION

1. FUELING SHOULD ONLY TAKE PLACE IN SIGNED DES

1. FUELING SHOULD ONLY TAKE PLACE IN SIGNED DESIGNATED AREAS, AWAY FROM DOWNSTREAM DRAINAGE FACILITIES AND WATERCOURSES.
2. FUELING MUST BE WITH NOZZLES EQUIPPED WITH AUTOMATIC SHUT-OFF TO CONTROL DRIPS. DO NOT TOP OFF.
3. PROTECT THE AREAS WHERE EQUIPMENT OR VEHICLES ARE BEING REPAIRED, MAINTAINED, FUELED OR PARKED FROM STORMWATER RUN-ON AND RUNOFF.
4. USE BARRIERS SUCH AS BERMS TO PREVENT STORM WATER RUN-ON AND RUNOFF, AND TO CONTAIN SPILLS.
5. PLACE A "FUELING AREA" SIGN NEXT TO EACH FUELING AREA.
6. STORE HAZARDOUS MATERIALS SUCH AS FUEL, SOLVENTS, OIL AND CHEMICALS IN SECONDARY CONTAINMENT.
7. INSPECT VEHICLES AND EQUIPMENT FOR LEAKS ON EACH DAY OF USE. REPAIR FLUID AND OIL LEAKS IMMEDIATELY.
8. ABSORBENT SPILL CLEAN-UP MATERIALS AND SPILL KITS MUST BE AVAILABLE IN FUELING AREAS AND ON FUEL TRUCKS.
9. IF FUELING IS TO TAKE PLACE AT NIGHT, MAKE SURE THE FUELING AREA IS SUFFICIENTLY ILLUMINATED.
10. PROPERLY DISPOSE OF USED OIL, FLUIDS, LUBRICANTS AND SPILL CLEAN-UP MATERIALS.

CLEAN UP SPILLS

1. ALL SPILLS/RELEASES SHOULD BE REPORTED IMMEDIATELY TO AMTRAK'S FACILITY ENVIRONMENTAL COORDINATOR.
2. IF IT IS SAFE TO DO SO, IMMEDIATELY CONTAIN AND CLEAN UP ANY CHEMICAL AND/OR HAZARDOUS MATERIAL SPILLS.
3. PROPERLY DISPOSE OF USED OIL, FLUIDS, LUBRICANTS AND SPILL CLEAN-UP MATERIALS.
4. DO NOT BURY SPILLS OR WASH THEM DOWN WITH WATER.



LEAKS AND DRIPS

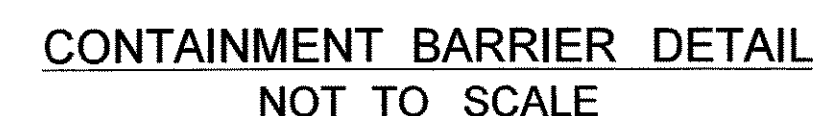
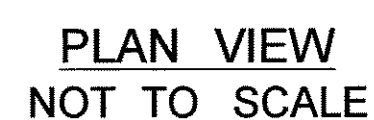
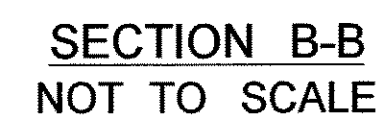
1. USE DRIP PANS OR ABSORBENT PADS AT ALL TIMES. PLACE UNDER AND AROUND LEAKY EQUIPMENT.
2. DO NOT ALLOW OIL, GREASE, FUEL OR CHEMICALS TO DRIP ONTO THE GROUND.
3. HAVE SPILL KITS AND CLEAN UP MATERIAL ON-SITE.
4. REPAIR LEAKY EQUIPMENT PROMPTLY. REMOVE PROBLEM VEHICLES AND EQUIPMENT FROM THE SITE. CLEAN UP CONTAMINATED SOIL IMMEDIATELY.
5. STORE CONTAMINATED WASTE IN SEALED CONTAINERS CONSTRUCTED OF SUITABLE MATERIAL. LABEL THESE CONTAINERS PROPERLY.
6. CLEAN UP ALL SPILLS AND LEAKS. PROMPTLY DISPOSE OF WASTE AND SPENT CLEAN UP MATERIALS.

THE CONSTRUCTION SITE POLLUTION PREVENTION PLAN SHOULD INCLUDE THE FOLLOWING ELEMENTS:

- # 1. MATERIAL INVENTORY
- DOCUMENT THE STORAGE AND USE OF THE FOLLOWING MATERIALS:
- A. CONCRETE
 - B. DETERGENTS
 - C. PAINTS (ENAMEL AND LATEX)
 - D. CLEANING SOLVENTS
 - E. PESTICIDES
 - F. WOOD SCRAPS
 - G. FERTILIZERS
 - H. PETROLEUM BASED PRODUCTS
- # 2. GOOD HOUSEKEEPING PRACTICES
- A. STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
 - B. ALL MATERIALS SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR ORIGINAL LABELED CONTAINERS AND COVERED.
 - C. SUBSTANCES SHALL NOT BE MIXED.
 - D. WHEN POSSIBLE, ALL OF A PRODUCT SHALL BE USED UP PRIOR TO DISPOSAL OF THE CONTAINER.
 - E. MANUFACTURERS' INSTRUCTIONS FOR DISPOSAL SHALL BE STRICTLY ADHERED TO.
 - F. THE SITE FOREMAN SHALL DESIGNATE SOMEONE TO INSPECT ALL BMPS DAILY.
- # 3. WASTE MANAGEMENT PRACTICES
- A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED DUMPSTERS IN A LOCATION THAT DOES NOT DRAIN TO A WATERBODY.
 - B. WASTE MATERIALS SHALL BE SALVAGED AND/OR RECYCLED WHENEVER POSSIBLE.
 - C. THE DUMPSTERS SHALL BE EMPTIED A MINIMUM OF TWICE PER WEEK OR MORE IF NECESSARY. THE LICENSED TRASH HAULER IS RESPONSIBLE FOR CLEANING OUT DUMPSTERS.
 - D. TRASH SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE DELAWARE LAWS.
 - E. TRASH CANS SHALL BE PLACED AT ALL LUNCH SPOTS AND LITTERING IS STRICTLY PROHIBITED. RECYCLE BINS SHALL BE PLACED NEAR THE CONSTRUCTION TRAILER.
- # 4. EQUIPMENT MAINTENANCE PRACTICES
- A. IF POSSIBLE, EQUIPMENT SHOULD BE TAKEN TO OFF-SITE COMMERCIAL FACILITIES FOR MAINTENANCE.
 - B. DRIP PANS SHALL BE USED FOR ALL EQUIPMENT MAINTENANCE.
 - C. EQUIPMENT SHALL BE INSPECTED FOR LEAKS ON A DAILY BASIS.
 - D. WASHOUT FROM CONCRETE TRUCKS SHALL BE DISPOSED OF IN A TEMPORARY PIT FOR HARDENING AND PROPER DISPOSAL.
 - E. FUEL NOZZLES SHALL BE EQUIPPED WITH AUTOMATIC SHUT-OFF VALVES.
 - F. ALL USED PRODUCTS SUCH AS OIL, ANTIFREEZE, SOLVENTS AND TIRES SHALL BE DISPOSED OF IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS AND LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS.
- # 5. SPILL PREVENTION PRACTICES
- A. POTENTIAL SPILL AREAS SHALL BE IDENTIFIED AND CONTAINED IN COVERED AREAS WITH NO CONNECTION TO THE STORM DRAIN SYSTEM.
 - B. WARNING SIGNS SHALL BE POSTED IN HAZARDOUS MATERIAL STORAGE AREAS.
 - C. PREVENTIVE MAINTENANCE SHALL BE PERFORMED ON ALL TANKS, VALVES, PUMPS, PIPES AND OTHER EQUIPMENT AS NECESSARY.
 - D. LOW OR NON-TOXIC SUBSTANCES SHALL BE PRIORITIZED FOR USE.
 - E. CONTACT INFORMATION FOR REPORTING SPILLS THROUGH THE DNR 24-HOUR TOLL FREE NUMBER SHALL BE PROMINENTLY POSTED.



6. EDUCATION
- A. BEST MANAGEMENT PRACTICES FOR CONSTRUCTION SITE POLLUTION CONTROL SHALL BE A PART OF REGULAR PROGRESS MEETINGS.
- B. INFORMATION REGARDING WASTE MANAGEMENT, EQUIPMENT MAINTENANCE AND SPILL PREVENTION SHALL BE PROMINENTLY POSTED IN THE CONSTRUCTION TRAILER.

E&S CONTROL NOTES AND DETAILS		THIS DOCUMENT WAS PREPARED BY: STANTEC FOR AMTRAK		OWNER:  4001 Vandewater Avenue Arlington Heights, IL 60015 Phone: (847) 426-6868		 stantec 5000 River Road, Suite 102 McLean, VA 22101 Phone: (703) 646-9252		VEHICLE CLEANING PADS	
DATE: 09/01/2015		SCALE: AS SHOWN		DESIGNED BY:RJH		FILE NO.:213402048		1 04/25/14	
REV:		SHEET 9 OF 13						2 07/23/15 REVISIONS AS PER 07/02/15 DNREC MEETING	
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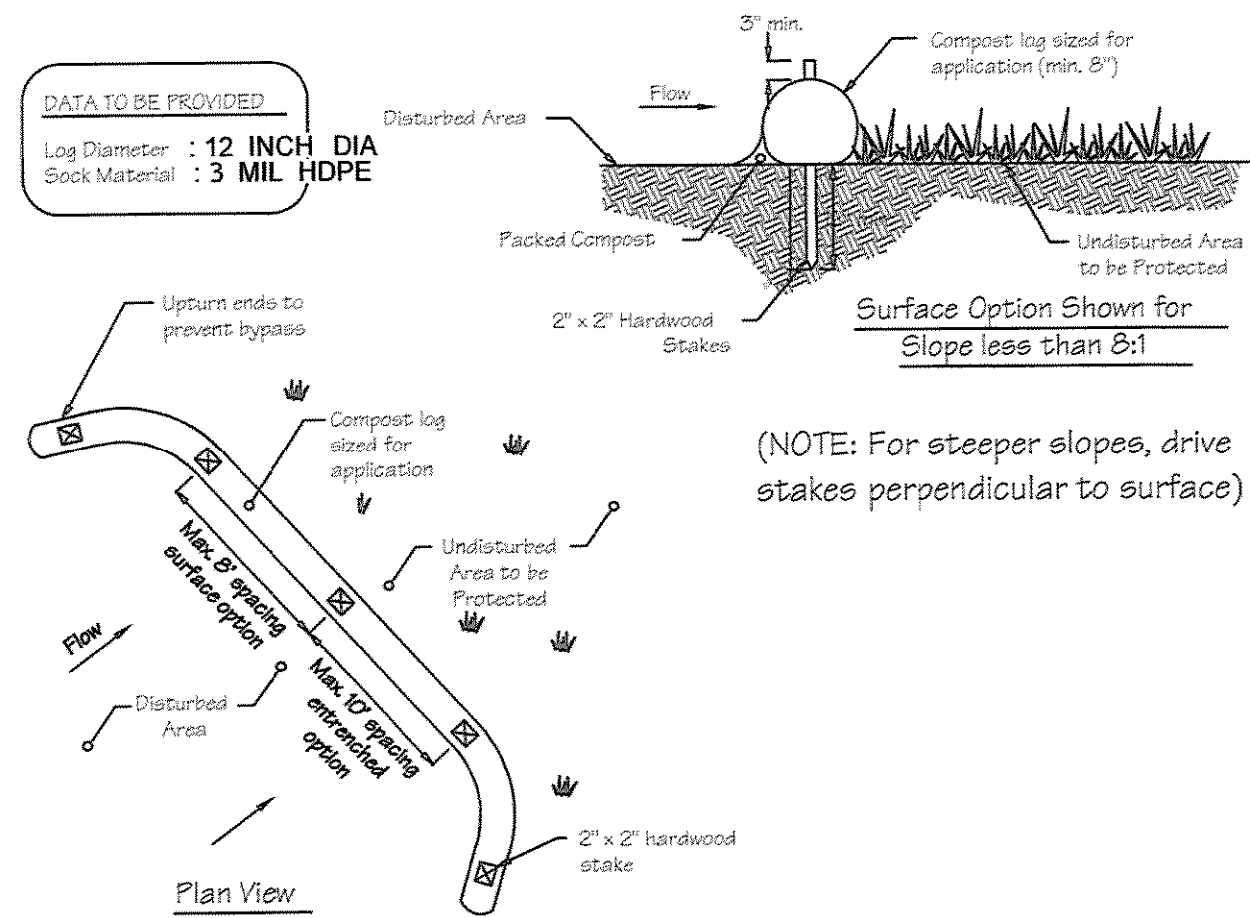


1. SOIL HANDLING AREA (WORK AREA #4) THAT WILL BE LINED SHALL BE SMOOTH AND FREE OF DEBRIS.
2. CONCRETE JERSEY BARRIER WILL BE USED TO CONSTRUCT CONTAINMENT BARRIER AND SEGREGATE SOIL AND FILTER LOG.
3. A STORMWATER DIVERSION BARRIER WILL BE CONSTRUCTED AT ENTRANCE OF SOIL HANDLING AREA TO DIVERT STORMWATER RUNOFF FROM COMING IN CONTACT WITH SOIL HANDLING AREA.
4. NON-WOVEN GEOTEXTILE AND 10 MIL LINER WILL BE PLACED OVER THE CONTAINMENT BARRIER AND SECURED ON BOTH SIDES AS INDICATED IN THE DETAIL ABOVE.
5. CARE SHOULD BE TAKEN NOT TO DAMAGE THE LINER SYSTEM AS SOIL IS BEING PLACED. DO NOT ALLOW TRACKED EQUIPMENT TO OPERATE DIRECTLY ON LINER SYSTEM WITHOUT A COVER OF SOIL.
6. AS SOIL IS PLACED, INSTALL 10 MIL LINER. SOIL SHOULD NOT REMAIN EXPOSED BEYOND END OF WORK DAY IN WHICH SOIL PLACEMENT HAS BEEN PERFORMED.
7. ANY ACCUMULATED STORMWATER WITHIN THE CONCRETE JERSEY BARRIER AREA SHALL BE TRANSFERRED TO THE ON-SITE SYSTEM OR TO CONTAINMENT FOR OFF-SITE DISPOSAL.

SOIL PLACEMENT AREA DETAIL
NOT TO SCALE

E&S CONTROL NOTES AND DETAILS FOR WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS CITY OF WILMINGTON NEW CASTLE COUNTY, DE				OWNER:  4001 Vandewater Avenue Wilmington, DE 19802 Phone: (302) 423-6458		 5000 River Road, Suite 102 Mechanicville, PA 17055 Phone: (717) 516-3502		THIS DOCUMENT WAS PREPARED BY: STANTEC FOR: AMTRAK	
DATE: 09/01/2015				SCALE: AS SHOWN		DESIGNED BY: R-JH		FILE NO.: 213402048	
SHEET 10 OF 13				REV:		1		04/25/14	
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Standard Detail & Specifications Compost Filter Log



Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrex TM International	CFL	DE-ESC-3.1.7 Sheet 1 of 2 Date: 03/13

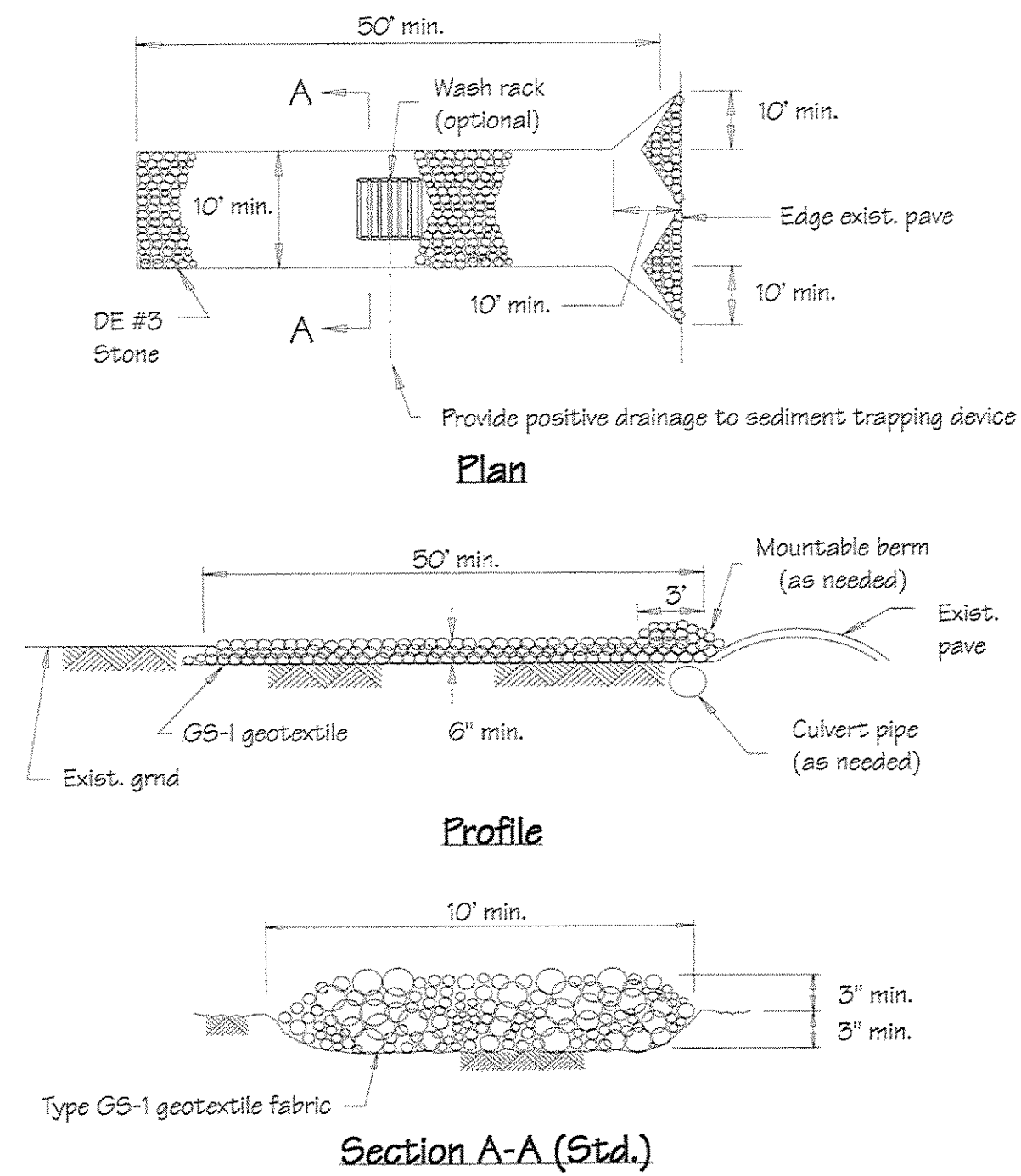
Standard Detail & Specifications Compost Filter Log

Construction Notes:

- Prior to installation, clear bedding area of obstructions including rocks or debris larger than 1 inch and fill in any sharp depression areas.
- Fill the sock fabric using a pneumatic blower so that the logs are rigid and do not deform. Terminate at the desired length.
- For trenched applications, excavate 2 to 4 inches below grade along the width and length of the compost filter log.
- Install the compost filter logs perpendicular to the flow direction and parallel to the slope with the beginning and end of the installation pointing up the slope a minimum of 1 foot elevation difference. On sites where this is not possible, upturn at a minimum length of 10' at a 30 degree angle to prevent runoff bypass.
- For untrenched applications, blow or hand pack soil, mulch, or compost on the upslope side of the log, filling the bottom void area.
- Stake the filled log every 10 feet maximum through the center of the sock for trenched applications, or every 8 feet for untrenched. The stake shall be a 2" by 2" hardwood. It should extend 12" below grade and protrude at least 3" above the top of the sock. If located on a slope greater than 8:1, the stake shall be angled downslope at a 45 degree angle to prevent the force of the water from dislodging to log.
- When the length of the compost filter log needed exceeds the available compost filter sock length, the next sock shall be overlapped a minimum of 12" before being filled, and a stake placed through both socks at the overlap.
- Remove accumulated sediment when it has reached half of the effective height of the log.
- Inspect weekly and after rain event. If sock is degrading or the sock is failing, vegetate to secure the compost, replace the log, or reinforce with an additional log. If the log has been crushed due to construction equipment, it can be "fluffed" back to its effective height. If the effective height can no longer be restored, the log shall be replaced or reinforced with an additional compost filter log.

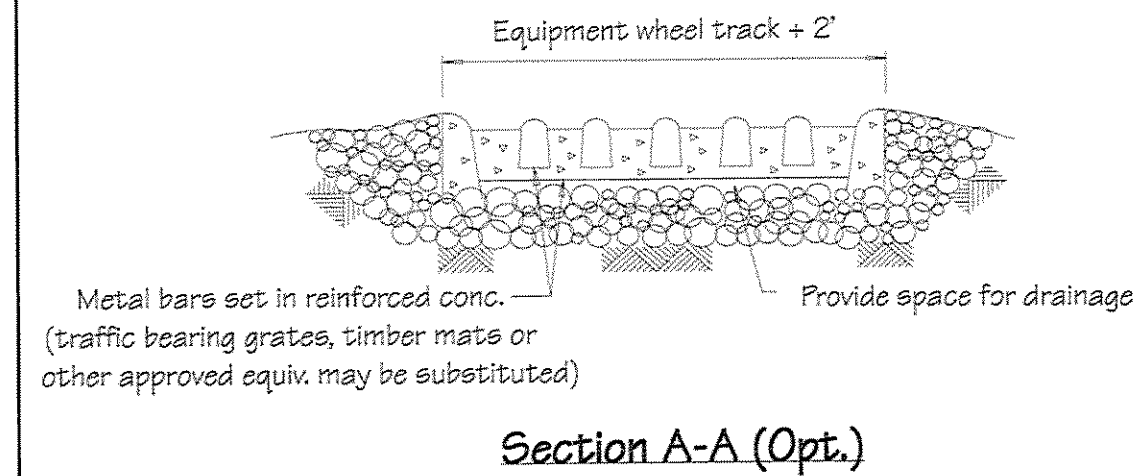
Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrex TM International	CFL	DE-ESC-3.1.7 Sheet 2 of 2 Date: 03/13

Standard Detail & Specifications Stabilized Construct. Entrance



Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	DE-ESC-3.4.7 Sheet 1 of 2 Date: 12/03

Standard Detail & Specifications Stabilized Construct. Entrance

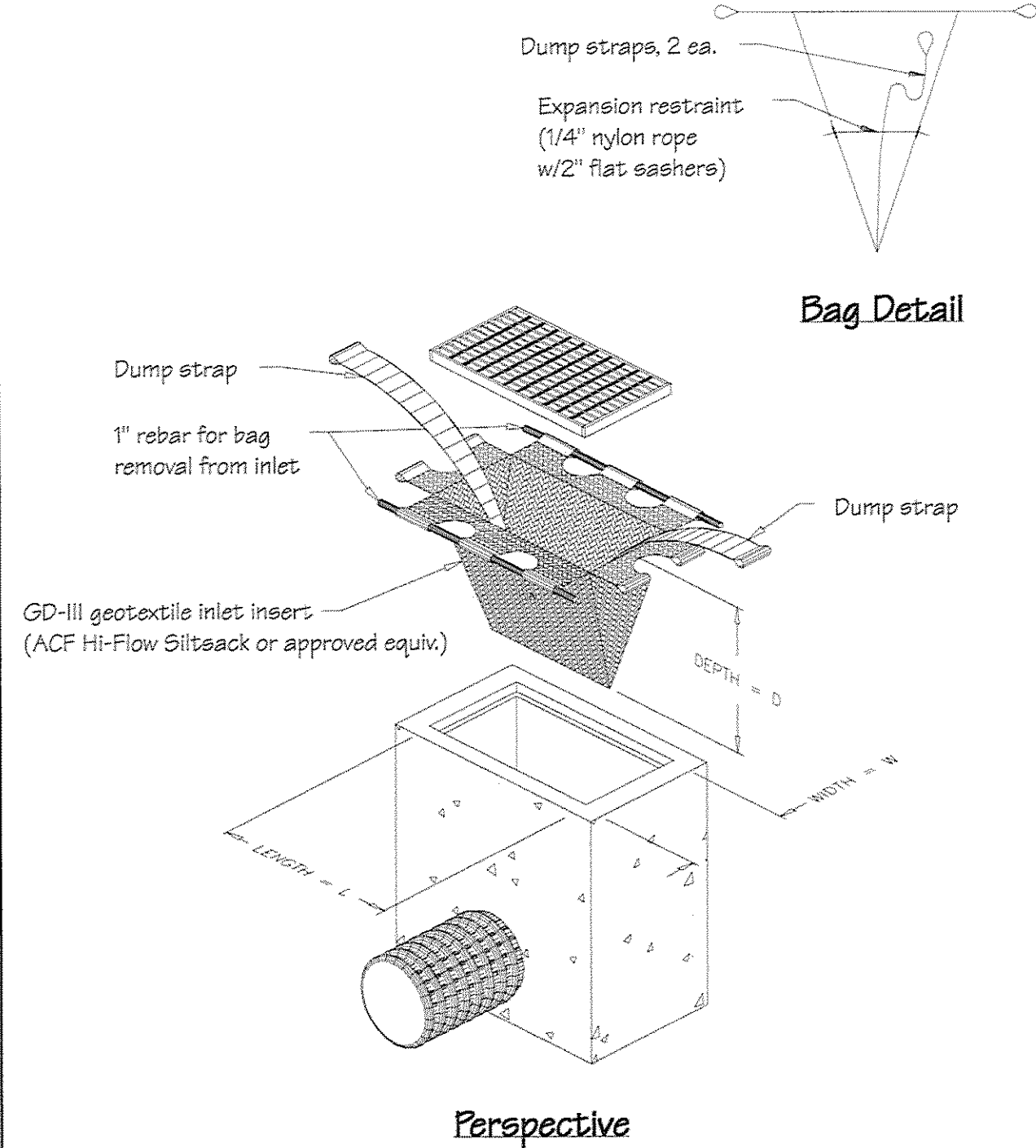


Construction Notes:

- Stone size - Use DE #3 stone.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than size (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
- Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
- Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	DE-ESC-3.4.7 Sheet 2 of 2 Date: 12/03

Standard Detail & Specifications Inlet Protection - Type 2



Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 1 of 2 Date: 12/03

Notes:

- This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
- It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
- For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbent pillow or shall be made completely from an oil-absorbent material with a woven pillow.

Materials:

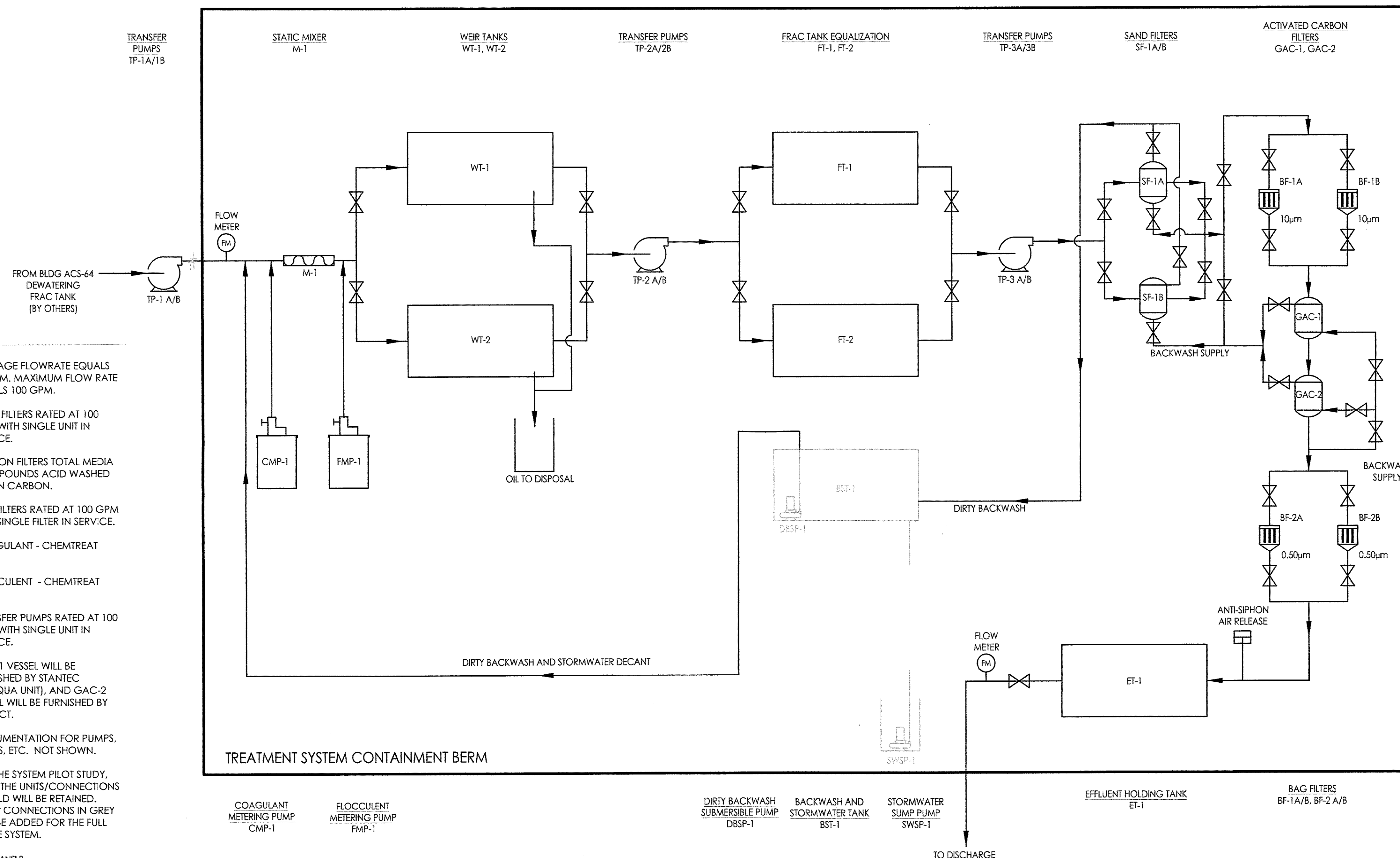
The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 2 of 2 Date: 12/03



1. DURING EXCAVATION ACTIVITIES, ENCOUNTERED GROUND WATER WILL BE PROCESSED THROUGH THE TREATMENT SYSTEM AS SPECIFIED IN THE DEWATERING TREATMENT DESIGN AND THE DIAGRAM BELOW.
2. TREATED DEWATERING EFFLUENT WILL BE DISCHARGED INTO STORM DRAIN INLETS TO OUTFALL 007, A PERMITTED OUTFALL UNDER THE SITE-WIDE NPDES PERMIT NUMBER DE 0050962.

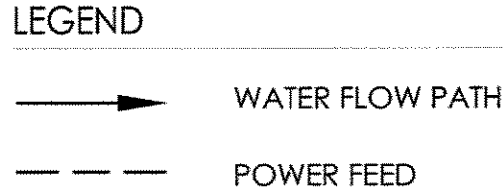
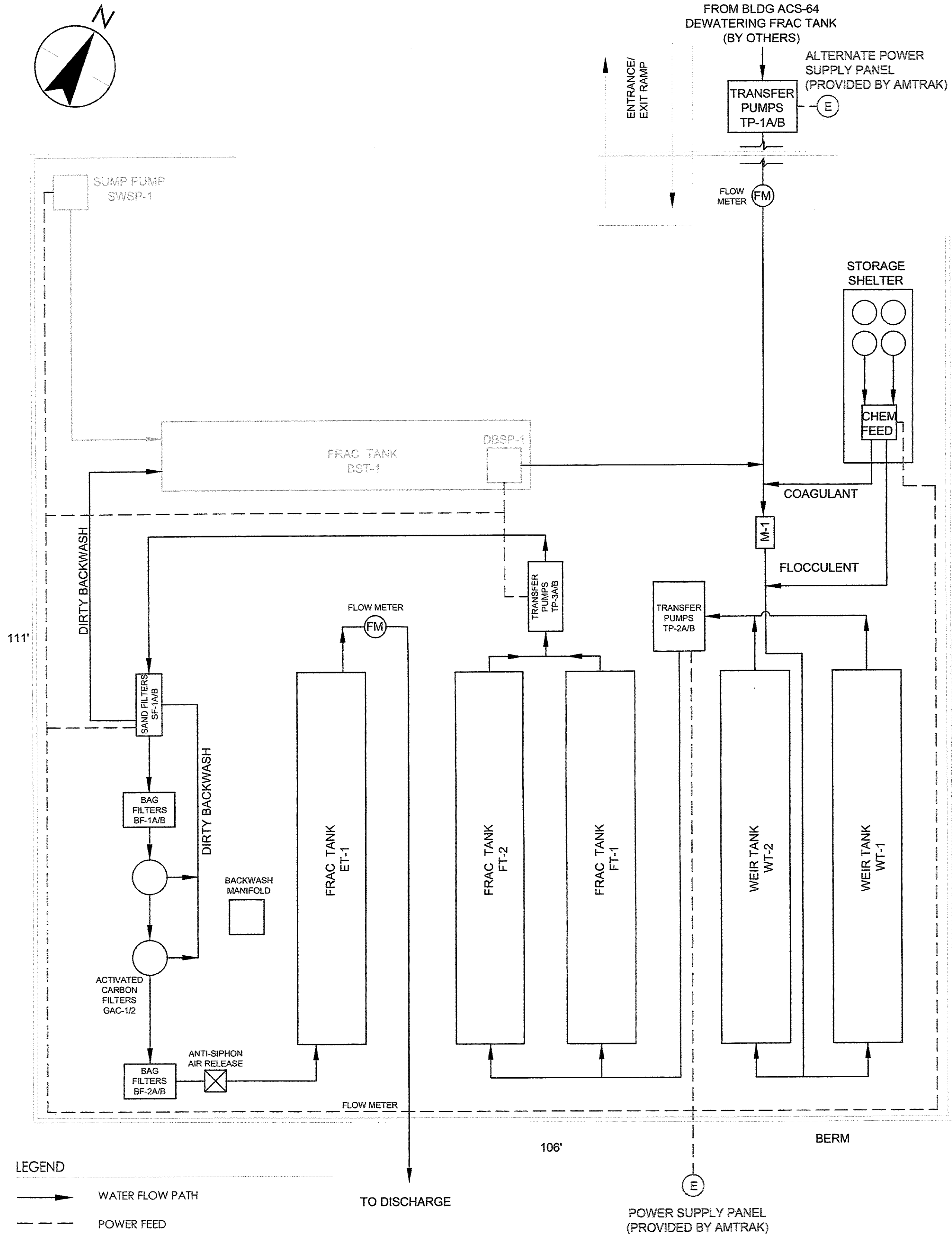
1. AVERAGE FLOWRATE EQUALS 50 GPM. MAXIMUM FLOW RATE EQUALS 100 GPM.
2. SAND FILTERS RATED AT 100 GPM WITH SINGLE UNIT IN SERVICE.
3. CARBON FILTERS TOTAL MEDIA 4,000 POUNDS ACID WASHED VIRGIN CARBON.
4. BAG FILTERS RATED AT 100 GPM WITH SINGLE FILTER IN SERVICE.
5. COAGULANT - CHEMTREAT P891L.
6. FLOCCULENT - CHEMTREAT P850L.
7. TRANSFER PUMPS RATED AT 100 GPM WITH SINGLE UNIT IN SERVICE.
8. GAC-1 VESSEL WILL BE FURNISHED BY STANTEC (EVOQUA UNIT), AND GAC-2 VESSEL WILL BE FURNISHED BY PROACT.
9. INSTRUMENTATION FOR PUMPS, FILTERS, ETC. NOT SHOWN.
10. FOR THE SYSTEM PILOT STUDY, ONLY THE UNITS/CONNECTIONS IN BOLD WILL BE RETAINED. UNITS/ CONNECTIONS IN GREY WILL BE ADDED FOR THE FULL SCALE SYSTEM.

ACS-64 DEWATERING TREATMENT SYSTEM
PROCESS FLOW DIAGRAM
NOT TO SCALE



06/2015
213402048

E&S CONTROL NOTES AND DETAILS FOR WILMINGTON MAINTENANCE FACILITY FACILITIES AND INFRASTRUCTURE IMPROVEMENT PROJECTS NEW CASTLE COUNTY DE CITY OF WILMINGTON			OWNER:  AMTRAK® 4001 Vandalia Avenue Wilmington, DE 19802 Phone: (302) 423-6458		 stantec 5000 Pitten River, Suite 100 Mechanicsburg, PA 17055 Phone: (717) 516-3502		<table><tr><td>1</td><td>04/23/14</td><td>VEHICLE CLEANING PADS</td><td></td></tr><tr><td>2</td><td>07/23/15</td><td>REVISIONS AS PER 07/02/15 DNRCC MEETING</td><td></td></tr><tr><td>3</td><td>09/01/15</td><td>SUBMISSION TO DNRCC</td><td></td></tr><tr><td>4</td><td>10/23/15</td><td>REVISIONS AS PER 10/02/15 DNRCC MEMO</td><td></td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td>REV:</td><td> </td><td> </td><td> </td></tr><tr><td>DESIGNED BY:</td><td> </td><td>DATE:</td><td> </td></tr><tr><td>CHECKED BY:</td><td> </td><td>INSCRIPTION:</td><td> </td></tr><tr><td>APPROVED BY:</td><td> </td><td>REV:</td><td> </td></tr></table>				1	04/23/14	VEHICLE CLEANING PADS		2	07/23/15	REVISIONS AS PER 07/02/15 DNRCC MEETING		3	09/01/15	SUBMISSION TO DNRCC		4	10/23/15	REVISIONS AS PER 10/02/15 DNRCC MEMO						REV:				DESIGNED BY:		DATE:		CHECKED BY:		INSCRIPTION:		APPROVED BY:		REV:	
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- NOTES**
- GAC-1 VESSEL WILL BE FURNISHED BY STANTEC (EVOQUA UNIT), AND GAC-2 VESSEL WILL BE FURNISHED BY PROACT.
 - BACKWASHING OF THE GAC AND SAND FILTER UNITS WILL BE PERFORMED BY THE FORWARD FLOW PROVIDED BY TP-3A/B.
 - FOR THE SYSTEM PILOT STUDY, ONLY THE UNITS/CONNECTIONS IN BOLD WILL BE RETAINED. UNITS/ CONNECTIONS IN GREY WILL BE ADDED FOR THE FULL SCALE SYSTEM.

Power Requirements					
Source	Item	Phase	Voltage	HP	Amperage
TP-1A	Centrifugal Pump	3	480	5	7.5
TP-1B	Centrifugal Pump	3	480	5	7.5
TP-2A	Centrifugal Pump	3	480	5	7.5
TP-2B	Centrifugal Pump	3	480	5	7.5
TP-3A	Centrifugal Pump	3	480	10	15
TP-3B	Centrifugal Pump	3	480	10	15
DBSP-1	Submersible Pump	1	120	2	20
SF-1A/B	Sand Filter - Solenoid Valves	1	110	—	1
SWSP-1	Sump Pump	1	115	1	10
Chem Feed	Coag Metering Pump	1	100-230	1	5
Chem Feed	Floc Metering Pump	1	100-230	1	5

ACS-64 DEWATERING TREATMENT SYSTEM
EQUIPMENT LAYOUT
NOT TO SCALE

VEHICLE DECONTAMINATION

PHYSICAL DECONTAMINATION

A. GENERAL

- THIS SECTION DESCRIBES THE EQUIPMENT AND PROCEDURES FOR DECONTAMINATION OF EQUIPMENT AND VEHICLES DURING OPERATIONS INVOLVING IMPACTED MATERIALS.
- COMPLY WITH THE REQUIREMENTS OF THE HEALTH & SAFETY PLAN (HASP) SUBMITTED TO AND ACCEPTED BY THE OWNER AS WELL AS ALL OTHER TECHNICAL SPECIFICATIONS RELATING TO THE TEMPORARY STORAGE, HANDLING AND DISPOSAL OF IMPACTED MATERIAL AND WASTE AND CONTROL OF WATER ON THE SITE.

B. PRODUCTS

1. NON-POTABLE WATER TANK

- PROVIDE A NON-POTABLE WATER TANK FOR USE AS A DECONTAMINATION WATER SUPPLY.
- DO NOT PLACE CONTAMINATED OR POTENTIALLY CONTAMINATED FLUIDS IN THE TANK/CONTAINER HOLDING WATER TO BE USED FOR DECONTAMINATION.
- DO NOT USE ADDITIVES (CAUSTICS, DETERGENTS, ETC.) FOR EQUIPMENT DECONTAMINATION.

2. EQUIPMENT AND VEHICLE CLEANING PAD

- CONSTRUCT A VEHICLE CLEANING PAD TO BE USED TO DECONTAMINATE ALL EQUIPMENT AND VEHICLES EXITING FROM THE SITE.
- THE CLEANING PAD MUST INCLUDE THE FOLLOWING ELEMENTS AT A MINIMUM:
 - BE DESIGNED FOR INTENDED USE (I.E., FOR THE DURATION OF THE PROJECT);
 - A COLLECTION SYSTEM FOR THE SPENT DECONTAMINATION WATER;
 - BE ADEQUATELY SIZED TO ACCOMMODATE THE WIDTH AND LENGTH OF THE LARGEST PIECE OF EQUIPMENT USED ON-SITE THAT MAY ENCOUNTER CONTAMINATED MATERIAL;
 - BE SURROUNDED BY A MINIMUM 42-INCH-HIGH SUPPORTED CONTAINMENT BERM OR STRUCTURE;
 - CONTAIN MEASURES TO ENSURE THAT SPLASH AND OVERSPRAY REMAIN WITHIN THE DECONTAMINATION PAD AND ARE COLLECTED WITH THE DECONTAMINATION WATER;
 - BE LINED WITH AN IMPERVIOUS BARRIER (E.G., HDPE OR VLDPE) AND SLOPE TO A SUMP AT THE LOW POINT TO ALLOW FOR COLLECTION OF DECONTAMINATION WATER; AND
 - BE EQUIPPED WITH WATER-TIGHT SUMP SUBMERSIBLE PUMP AND FLOAT SWITCH TO ACTIVATE THE PUMP SYSTEM.

3. PRESSURE WASHER

- PROVIDE A GASOLINE POWERED PRESSURE WASHER WITH HIGH-PRESSURE CAPACITY.
- MINIMUM CAPACITY OF WASHER: 2 TO 4 GALLONS PER MINUTE AT 3,500 POUNDS PER SQUARE INCH (PSI).

4. SUBMERSIBLE PUMPS

- PROVIDE PUMPS NECESSARY TO TRANSPORT WATER FROM THE VEHICLE CLEANING PAD TO A CONTAINER FOR TRANSFER TO THE WATER TREATMENT FACILITY SYSTEM PRIOR TO DISCHARGE TO ADJACENT UPLAND AREAS OF THE SITE FOR RE-INFILTRATION.

5. DECONTAMINATION PIPING

- USE PIPE OR HOSE TO CONVEY UNTREATED WATER;
- PROTECT THE PIPING FROM DAMAGE AND THE ELEMENTS; AND
- PROVIDE ALL PIPING NECESSARY TO RENDER THE TEMPORARY CLEANING FACILITIES OPERATIONAL.

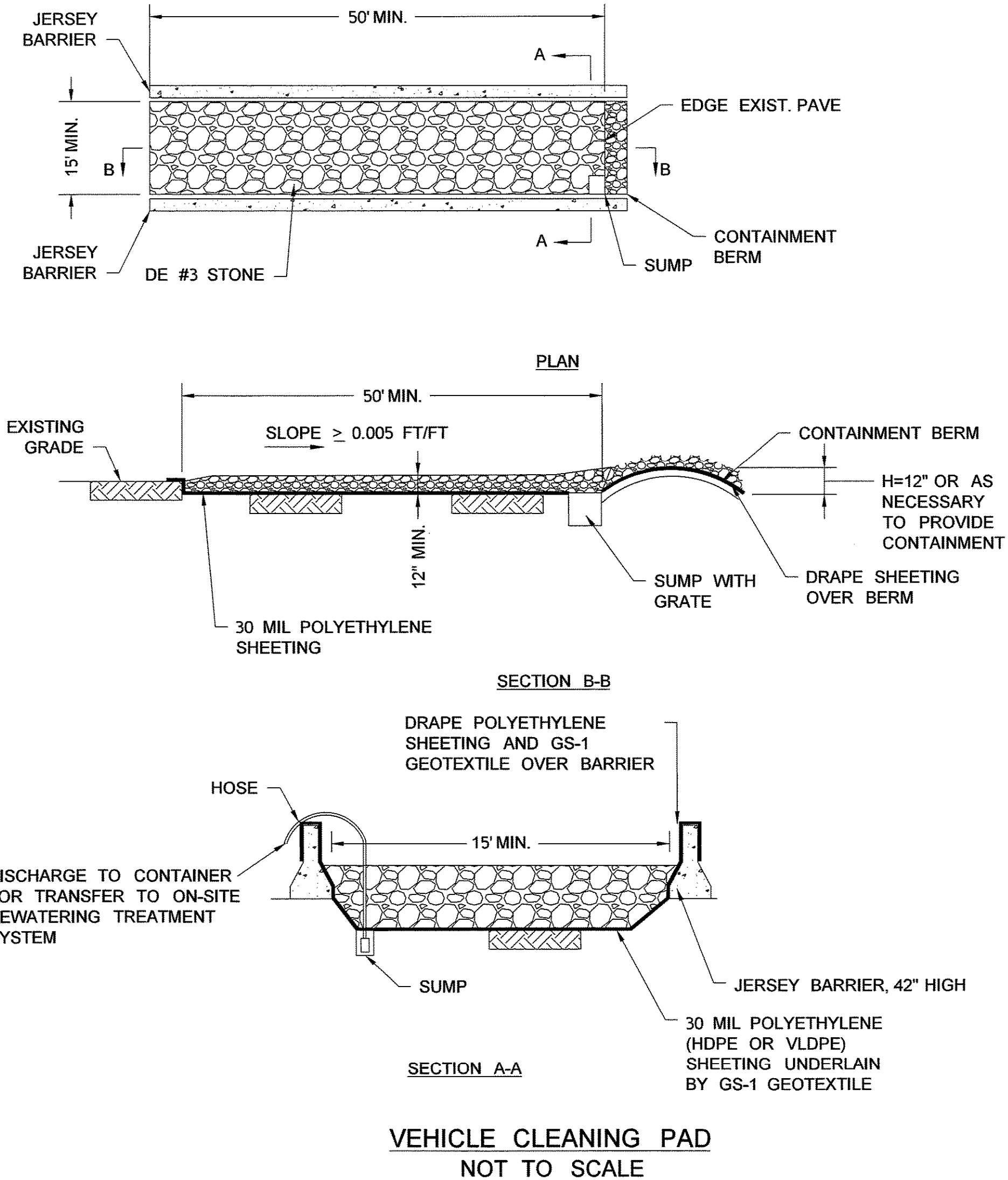
C. EXECUTION

6. INSTALLATION AND OPERATION

- INSTALL AND RELOCATE AS NECESSARY THE VEHICLE CLEANING PAD.
- OPERATE AND MAINTAIN THE VEHICLE CLEANING PAD AND ALL EQUIPMENT ASSOCIATED WITH THE PAD FOR THE DURATION OF THE WORK REQUIRING THE EXCAVATION, LOADING, AND/OR HANDLING OF ANY IMPACTED MATERIAL AT THE SITE.
- VEHICLE CLEANING WATER SHALL BE MANAGED ON SITE. DURING EARTHWORK ON SUBGRADE MATERIALS, VEHICLE CLEANING WATER SHALL BE PROCESSED ON SITE AT THE WATER TREATMENT FACILITY. CARBON TO BE DISPOSED OFF SITE AT A TSCA DISPOSAL FACILITY. FILTERED WATER SHALL BE DISCHARGED TO THE OUTFALL 007 STORMWATER CONVEYANCE.
- DISMANTLE VEHICLE CLEANING PAD AS NECESSARY TO FACILITATE SUBSEQUENT WORK.
- MAINTAIN ALL CONSTRUCTION ENTRANCES AND EXITS FOR THE DURATION OF THE WORK. MAINTENANCE INCLUDES, BUT IS NOT LIMITED TO RE-GRADING, PROVIDING AND REPLACING AND/OR REFURBISHING CRUSHED STONE ROADWAYS (BOTH WITHIN AND EXTERIOR TO THE DECONTAMINATION PAD(S)), SILT BARRIERS, STAKES, SIGNAGE AND ALL OTHER MATERIALS NECESSARY TO MINIMIZE TRACKING ANY MATERIAL OUTSIDE THE DEFINED PROJECT LIMITS.

CLEANUP AND DEMOBILIZATION

- SWEEP ALL PAVED AREAS SO THAT THEY ARE FREE OF DIRT.



- STONE SIZE - USE DE #3 STONE.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
- THICKNESS - NOT LESS THAN SIZE (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- GEOTEXTILE - TYPE GS-1; PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- INSPECTION - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

VEHICLE CLEANING PADS	04/25/14	07/23/15	09/01/15	10/12/15	REV.	DATE	DESCRIPTION
1	04/25/14	07/23/15	09/01/15	10/12/15	1	04/25/14	VEHICLE CLEANING PADS
2	07/23/15	09/01/15	10/12/15		2	07/23/15	REVISIONS AS PER 07/23/15 DNRCC MEETING
3	09/01/15	10/12/15			3	09/01/15	SUBMISSION TO DNRCC
4	10/12/15				4	10/12/15	REVISIONS AS PER 10/20/15 DNRCC MEETING
OWNER:	AMTRAK	4001 Vandalier Avenue Wilmington, DE 19802 Phone: (302) 425-6458					
THIS DOCUMENT WAS PREPARED BY:	STANTEC						
FOR:	AMTRAK						
E&S CONTROL NOTES AND DETAILS FOR	WILMINGTON MAINTENANCE FACILITY						
	FACILITIES AND INFRASTRUCTURE						
	IMPROVEMENT PROJECTS						
	CITY OF WILMINGTON						
DATE:	09/01/2015						
SCALE:	AS SHOWN						
DESIGNED BY:	RJH						
FILE NO.:	213402048						
SHEET	13 OF 13						
REV:							